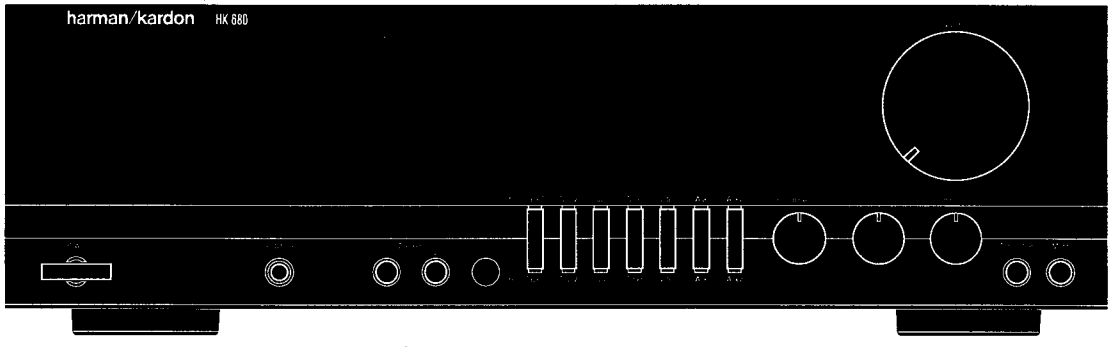
The Harman Kardon Model HK680

Manual 199A

INTEGRATED AMPLIFIER

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

(IB) : International model Black version

(I) : International model

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Parts and Service Office
80 Crossways Park West,Woodbury,N.Y. 11797
1112-HK680-A G9502 300 Printed in Japan

SPECIFICATIONS

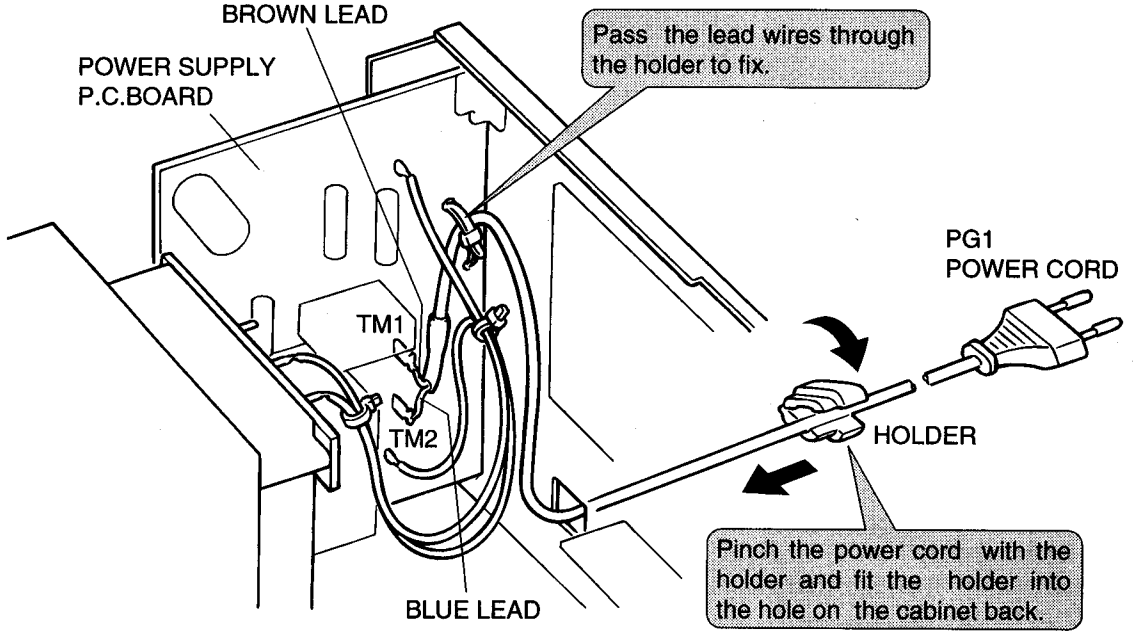
	Nominal	Limit
RMS Output Power		
8 Ω, 1kHz THD 0.1%	96.5W	≧ 85W
4 Ω, 1kHz THD 0.3%	147.9W	≧ 120W
High-instantaneous Current Capability (HCC)	76.0A	≧ 70A
Half Power Bandwidth (THD 0.1%)	<10Hz-98kHz	<10Hz-80kHz
Frequency Response (at -3dB down)	0.25Hz-248kHz	<1Hz-≧200kHz
Input Sensitivity (at 85W output)		
Tuner/CD:	140mV	>140mV±25mV/20kΩ±3kΩ
Option Phono (MM):	2.4mV/49kohm	
Option Phono (MC):	131μV/56Ω	
Signal to Noise Ratio		
Tuner/CD:	82.6dB	≧ 74dB
Option Phono (MM):	79dB	
Option Phono (MC):	75dB	
Channel Separation (at 10kHz)		
	69.8dB	≧ 50dB
Option Phono (MM):	65dB	
Option Phono (MC):	65dB	
IM Distortion Ratio (at 1W)	0.042%	≦ 0.1%
Damping Factor (at 1kHz)	64.2	≧ 60
Phono-Overload		
Option Phono (MM):	109mV	
Option Phono (MC):	5.6mV	

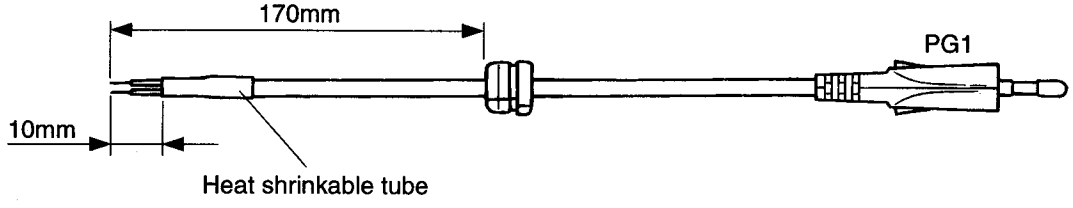
	Nominal	Limit
Tone Control Characteristics		
Bass (at 50Hz)		
Boost	10dB	± 2dB
Cut	10dB	± 2dB
Treble (at 10kHz)		
Boost	10dB	± 2dB
Cut	10dB	± 2dB
DC Output Voltage (at 8Ω)		
L channel	0mV	± 60mV
R channel	0mV	± 60mV
Idling Current (at 8Ω)	50.0mA	50mA±5mA
Dimensions (W x H x D)	17.4" x 5.3" x 16.0" (443 x 134 x 406 mm)	
Weight	27.3lbs. / 12.4kg	
Power Supply	AC 230V, 50/60Hz	
Power Consumption	300W	

These specifications are service target specs.
Specifications and components are subject to change without notice.
Overall performance will be maintained or improved.

POWER CORD REPLACEMENT

In order to prevent fire or shock hazard when replacing the power cord, follow the procedure below to replace the parts with the standard supply parts.


BROWN LEAD
POWER SUPPLY P.C.BOARD
Pass the lead wires through the holder to fix.
PG1 POWER CORD
TM1
TM2
HOLDER
BLUE LEAD
Pinch the power cord with the holder and fit the holder into the hole on the cabinet back.



DISASSEMBLY PROCEDURES (REFER TO PAGES 7 AND 22)

[1] CABINET TOP (131) REMOVAL

Remove 8 screws (A) and then remove the Cabinet Top (131).

[2] FRONT PANEL ASS'Y (AA) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Pull out 3 Rotary Knobs (151).
3. Remove 5 screws (B) and then remove the Front Panel Ass'y (AA).

[3] MAIN AMP. P.C. BOARD (PCB-1) REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step [2].
2. Disconnect the 1 connector (CW703) from 1 connector (CN703) on the Input Selector P.C. Board (PCB-13).
3. Pull out the Rotary Knob (150) and 4 Push Buttons (146).
4. Disconnect the 1 connector (CW704) from 1 connector (CN704) on the Volume P.C. Board (PCB-11).
5. Remove 4 screws (C) and then remove the Metal Fitting (165).
6. Disconnect the 2 connectors (CW284 and CW705) from 2 connectors (CN284 and CN705) on the Main Amp. P.C. Board (PCB-1).
7. Remove 7 screws (D) and then remove the Main Amp. P.C. Board (PCB-1). If necessary unsolder the lead wire.

[4] INPUT SELECTOR P.C. BOARD (PCB-13) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Disconnect the 1 connector (CW703) from 1 connector (CN703) on the Input Selector P.C. Board (PCB-13).
3. Disconnect the 1 connector (CW281) from 1 connector (CN281) on the Power Supply P.C. Board (PCB-5).
4. Disconnect the 1 connector (CW704) from 1 connector (CN704) on the Volume P.C. Board (PCB-11).
5. Disconnect the 1 connector (CW705) from 1 connector (CN705) on the Main Amp. P.C. Board (PCB-1).
   Disconnect the 2 connectors (CW701 and CW702) from 2 connectors (CN701 and CN702) on the Control P.C. Board (PCB-12).
6. Remove 8 screws (E) and then remove Input Selector P.C. Board (PCB-13) with Power LED P.C. Board (PCB-15).

[5] VOLUME P.C. BOARD (PCB-11) REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step [2].
2. Disconnect the connector (CW703) from connector (CN703) on the Input Selector P.C. Board (PCB-13).
3. Pull out the Rotary Knob (150).
4. Disconnect the 1 connector (CW704) from 1 connector (CN704) on the Volume P.C. Board (PCB-11).
5. Remove hexagon nut (F) and then remove the Volume P.C. Board (PCB-11).

[6] TONE CONTROL P.C. BOARD (PCB-9) REMOVAL

1. Remove the Volume P.C. Board (PCB-11), referring to the previous step [5].
2. Disconnect the 1 connector (CW282) from 1 connector (CN282) on the Tone Control P.C. Board (PCB-9).
3. Disconnect the 1 connector (CW284) from 1 connector (CN284) on the Main Amp. P.C. Board (PCB-1).
4. Disconnect the 1 connector (CW203) from 1 connector (CN283) on the Control P.C. Board (PCB-12).
5. Pull out 2 Push Buttons (146).
6. Remove hexagon nuts (G), 3 screws (H) and then remove Tone Control P.C. Board (PCB-9) and Mono/Stereo Switch P.C. Board (PCB-10).

[7] POWER SUPPLY P.C. BOARD (PCB-5) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Disconnect 2 connectors (CW3 and CW281) from 2 connectors (CN3 and CN281) on the Power Supply P.C. Board (PCB-5).
3. Remove 2 screws (I) and then remove Power Supply P.C. Board (PCB-5).

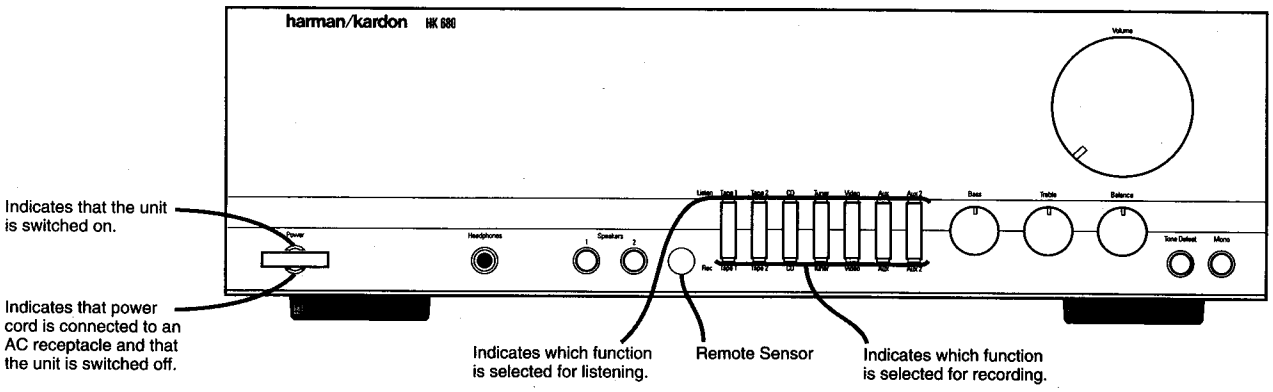
[8] CONTROL P.C. BOARD (PCB-12) REMOVAL

1. Remove the Main Amp. P.C. Board (PCB-1), referring to the previous step [3].
2. Remove 7 screws (J) and then Control P.C. Board (PCB-12).

[9] OPTION PHONO P.C. BOARD (PCB-101) REMOVAL

1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Disconnect the 1 connector (CW602) from 1 connector (CN102) on the Main P.C. Board (PCB-1).
   Disconnect the 1 connector (W601) from 1 connector (CN101) on the Control P.C. Board (PCB-12).
3. Remove 1 screw (K) and Rivet and then remove the Phono P.C. Board (PCB-101).

CONTROLS AND FUNCTIONS


harman/kardon HK 680
Indicates that the unit is switched on.
Indicates that power cord is connected to an AC receptacle and that the unit is switched off.
Indicates which function is selected for listening.
Remote Sensor
Indicates which function is selected for recording.

Power Switch
Press to turn the unit on and off.

Headphone Jack
Plug in headphones if desired. (With both Speakers 1 and 2 switches in Off position, output is supplied only to headphones.)

Speakers Switches
Push in to select either of two sets of speakers, or both, or neither (headphone output only).

Listen Selector Buttons
Select desired input source by pressing the corresponding button.

Record Selector Buttons
Select desired output source for recording by pressing the corresponding button.

Bass Control
Turn to increase or decrease the proportion of low frequency sound.

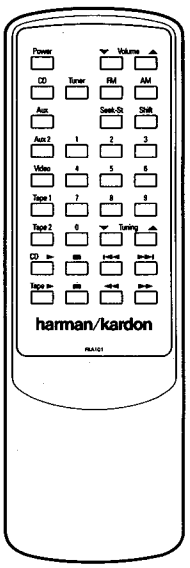
Treble Control
Turn to increase or decrease the proportion of high frequency sound.

Balance Control
Turn to adjust relative output level of left and right speakers.

Volume Control
Turn to raise or lower output volume.

Tone Defeat Switch
Press to bypass the bass and treble control circuitry. (The bass and treble controls have no effect.)

Mono Switch
Press to hear input from any source in mono.



Independent Remote Control
The keys on the remote control unit function the same as the corresponding buttons on the amplifier itself.
The remote control unit also includes many keys that allow for easy control of other Harman Kardon cassette tape deck, CD player and tuner.
Please refer to the owner's manual for each unit for operating instructions.
Some of these units must be connected to the amplifier's remote control output jacks so that the system remote control can operate them.

Operating Conditions
The control unit operates effectively within a distance of 7 meters and an angle of 30° from the amplifier. Using the control near fluorescent lights may shorten this range, as will any dust or dirt that accumulates on the front of the remote control, or the remote sensor area of the amplifier. Also avoid blocking the line of sight between amplifier and remote.
The control unit is powered by two AA batteries, included with your amplifier. When you replace weak batteries, replace both at the same time. When the remote is to be unused for an extended period, remove the batteries to prevent damage from corrosion.

ALIGNMENT PROCEDURES (REFER TO PAGES 8 AND 19)

■ **Conditions** : • Set the Function selector to the "CD" position.
• Set the Volume control to minimum.
• Make the adjustment at a room temperature of 77°F (25°C)

■ DC BALANCE ADJUSTMENT

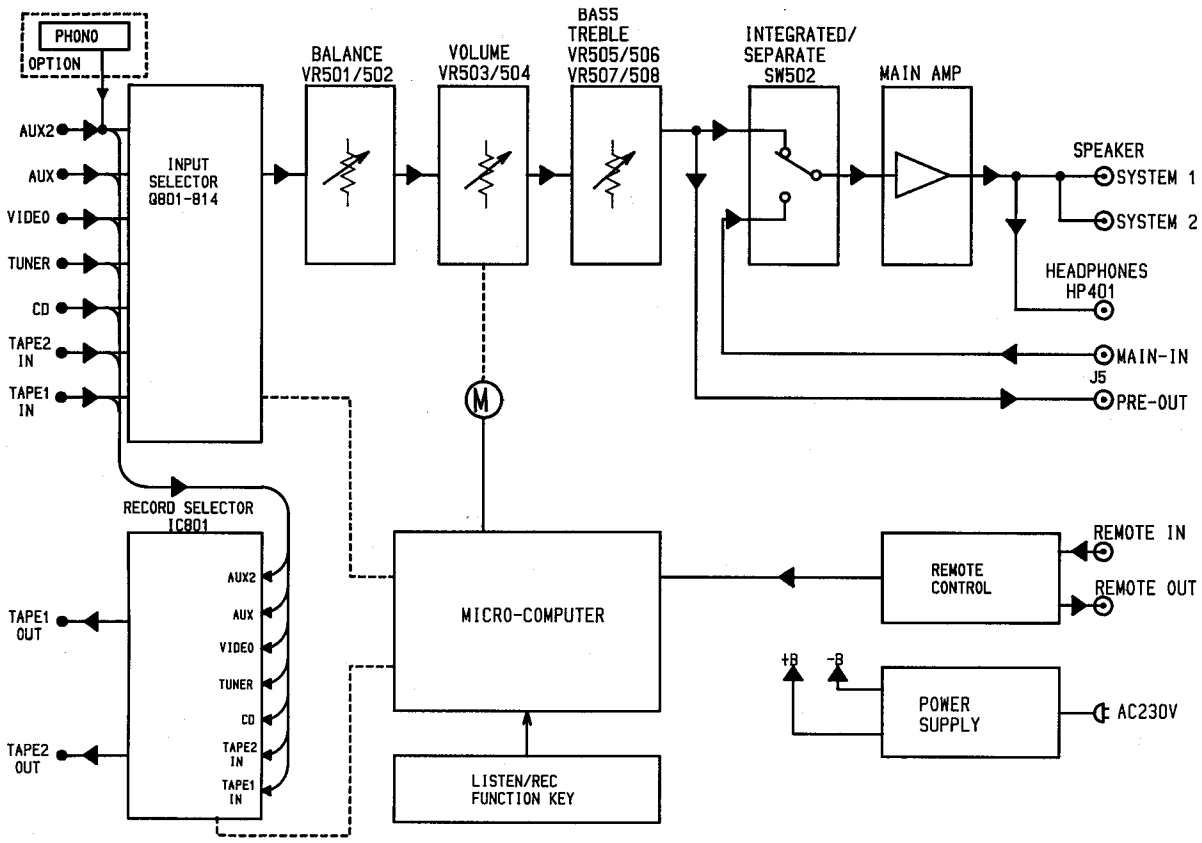
Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to Speaker output(L ch).	VR481	0±10mV
2	Connect the Digital Volt Meter to Speaker output(R ch).	VR482	0±10mV

■ IDLING CURRENT ADJUSTMENT

Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to TM403 and TM405.	VR401	22 mV
2	Connect the Digital Volt Meter to TM404 and TM406.	VR402	22 mV

■ After the above adjustment, leave the unit with its power on for longer than 15 minutes and then repeat the same adjustment.

BLOCK DIAGRAM

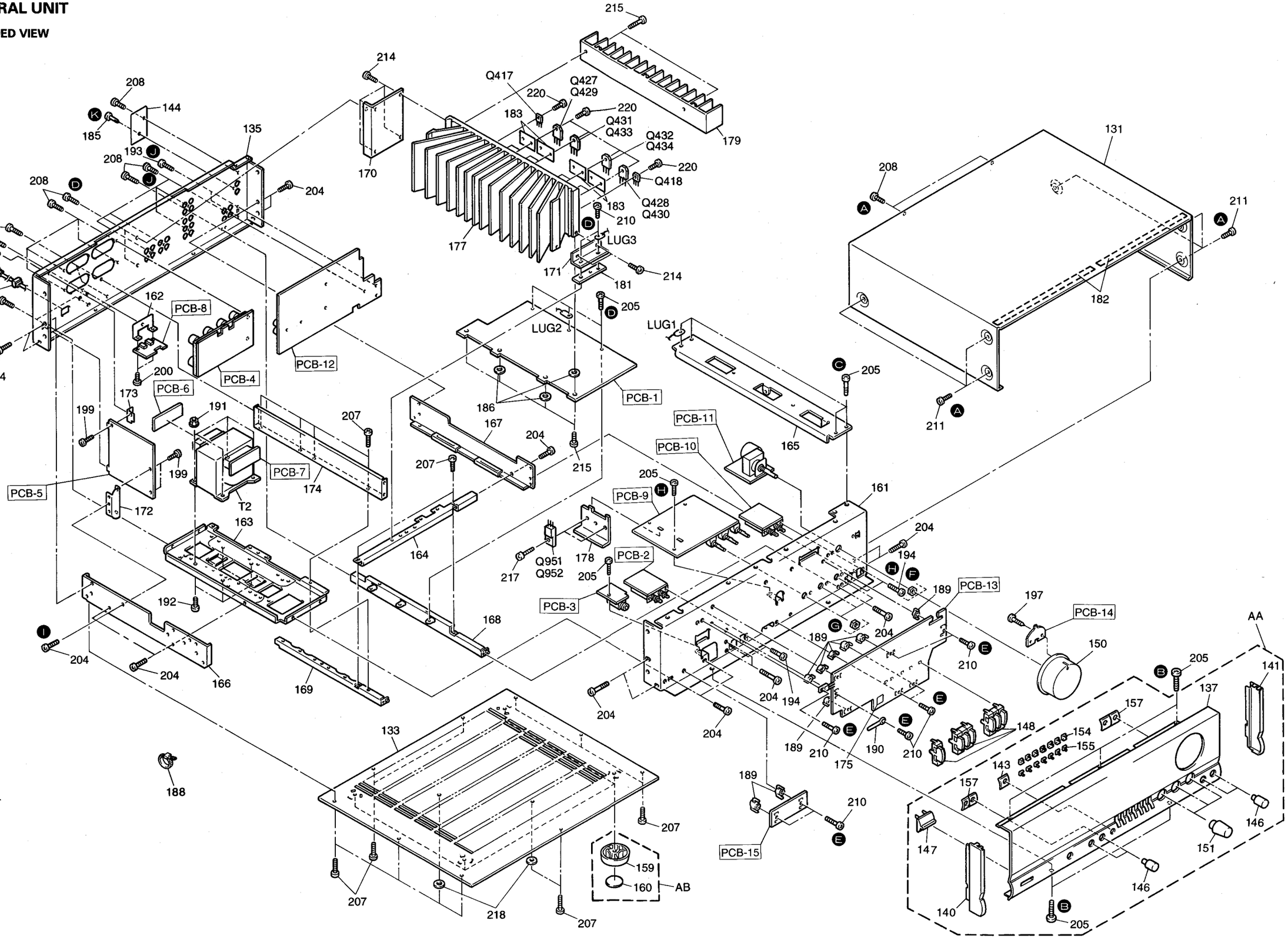


GENERAL UNIT PARTS LIST

Ref. No.	Part No.	Description
AA	A443-HK6880A	FRONT PANEL ASS'Y (IB)
AA	A443-HK6880B	FRONT PANEL ASS'Y (I)
AB	A319-HK6880A	LEG ASS'Y
131	1414-17801	CABINET TOP
133	1423-03101	CABINET BACK, BOTTOM
135	1424-38801	CABINET BACK, REAR
137	1443-15201	PANEL, FRONT (IB)
137	1443-15202	PANEL, FRONT (I)
140	1562-09602	FRAME, L (IB)
140	1562-09601	FRAME, L (I)
141	1562-09702	FRAME, R (IB)
141	1562-09701	FRAME, R (I)
143	1532-22801	WINDOW, REMOTE SENSOR
144	1511-23601	PLATE, PHONO
146	1662-67202	PUSH BUTTON, SPEAKES 1/2, TONE DEFEAT, MONO (IB)
146	1662-67201	PUSH BUTTON, SPEAKES 1/2, TONE DEFEAT, MONO (I)
147	1660-02302	PUSH BUTTON, POWER (IB)
147	1660-02301	PUSH BUTTON, POWER (I)
148	1662-71902	PUSH BUTTON, FUNCTION (IB)
148	1662-71901	PUSH BUTTON, FUNCTION (I)
150	1630-05002	ROTARY KNOB, VOLUME (IB)
150	1630-05001	ROTARY KNOB, VOLUME (I)
151	1632-20702	ROTARY KNOB, BASS, TREBLE, BALANCE (IB)
151	1632-20701	ROTARY KNOB, BASS, TREBLE, BALANCE (I)
154	1732-09801	INDICATOR, FUNCTION (LISTEN) (x7)
155	1732-09901	INDICATOR, FUNCTION (REC) (x7)
157	1742-09402	ORNAMENT, SPEAKERS, TONE DEFEAT/ MONO (X2) (IB)
157	1742-09401	ORNAMENT, SPEAKERS, TONE DEFEAT/ MONO (X2) (I)
159	1319-04303	LEG (x4)
160	1319-04601	LEG, SPONGE (x4)
161	2211-7332	CHASSIS
162	2219-8389	METAL FITTG, REMOTO IN/OUT
163	2219-8007	METAL FITTG, POWER TRANS
164	2219-8364	METAL FITTG, H CENTER
165	2219-8009	METAL FITTG, R SIDE TOP
166	2219-8010	METAL FITTG, TRANS SIDE
167	2219-8011	METAL FITTG, R SIDE
168	2219-8012	METAL FITTG, R CENTER
169	2219-8013	METAL FITTG, TRANS CENTER
170	2219-8366	METAL FITTG, MAIN HEAT SINK, REAR SIDE
171	2219-8367	METAL FITTG, MAIN HEAT SINK, FRONT SIDE
172	2219-8349	METAL FITTG, POWER IN SIDE
173	2219-8390	METAL FITTG, POWER IN PCB
174	2219-8393	METAL FITTG, RE IN FORCE
175	2114-131143	BUSHING, RCV701
177	2222-7346	HEAT SINK, Q417, 418, Q427-434
178	2222-7179	HEAT SINK, Q951, 952
179	2222-7347	HEAT SINK, MAIN TOP SIDE
181	2224-7090	INSULATOR, HEAT SINK
182	2224-146	INSULATOR, TOP COVER (x2)
183	2224-7147	INSULATOR, POWER TR (x4)
185	2459-3003511	RIVET, PLASTIC, PHONO PLATE
186	2402-0374	WASHER, PLASTIC, HEAT SINK (x6)
187	2114-71246	BUSHING, AC CORD
188	2240-R0101	HOLDER, WIRING (x20)
189	2360-7026	BOSS, SPECIAL, FRONT (x9)
190	2218-R0130	BRACKET,FIX, WIRING
191	2440-60	NUT,SPE (x4)
192	2327-R0140102	SCREW,BND+ (4x10 mm)(x4)
193	2327-R0126044	SCREW,BND+ (2.6x4 mm)(x2)
194	2327-R0130062	SCREW,BND+ (3x6 mm)(x4)
197	2347-R0126082	SCREW,BND T+ (2.6x8 mm)
199	2347-R0130062	SCREW,BND T+ (3x6 mm)(x3)
200	2347-R0130062	SCREW,BND T+ (3x6 mm)(x2)
204	2347-R0130062	SCREW,BND T+ (3x6 mm)(x17)
205	2347-R0130062	SCREW,BND T+ (3x6 mm)(x14)
207	2347-R0130082	SCREW,BND T+ (3x8 mm)(x17)
208	2347-R0130084	SCREW,BND T+ (3x8 mm)(x21)
210	2347-R0130102	SCREW,BND T+ (3x10 mm)(x10)
211	2347-R0140064	SCREW,BND T+ (4x6 mm)(x6)
214	2347-R0130062	SCREW,BND T+ (3x6 mm)(x6)
215	2347-R0130102	SCREW,BND T+ (3x10 mm)(x7)
217	2347-R0130082	SCREW,BND T+ (3x8 mm)(x2)
218	2401-0473	WASHER,METAL (x2)
220	2557-F301426	SCREW,B SPW+ (3x14 mm)(x10)

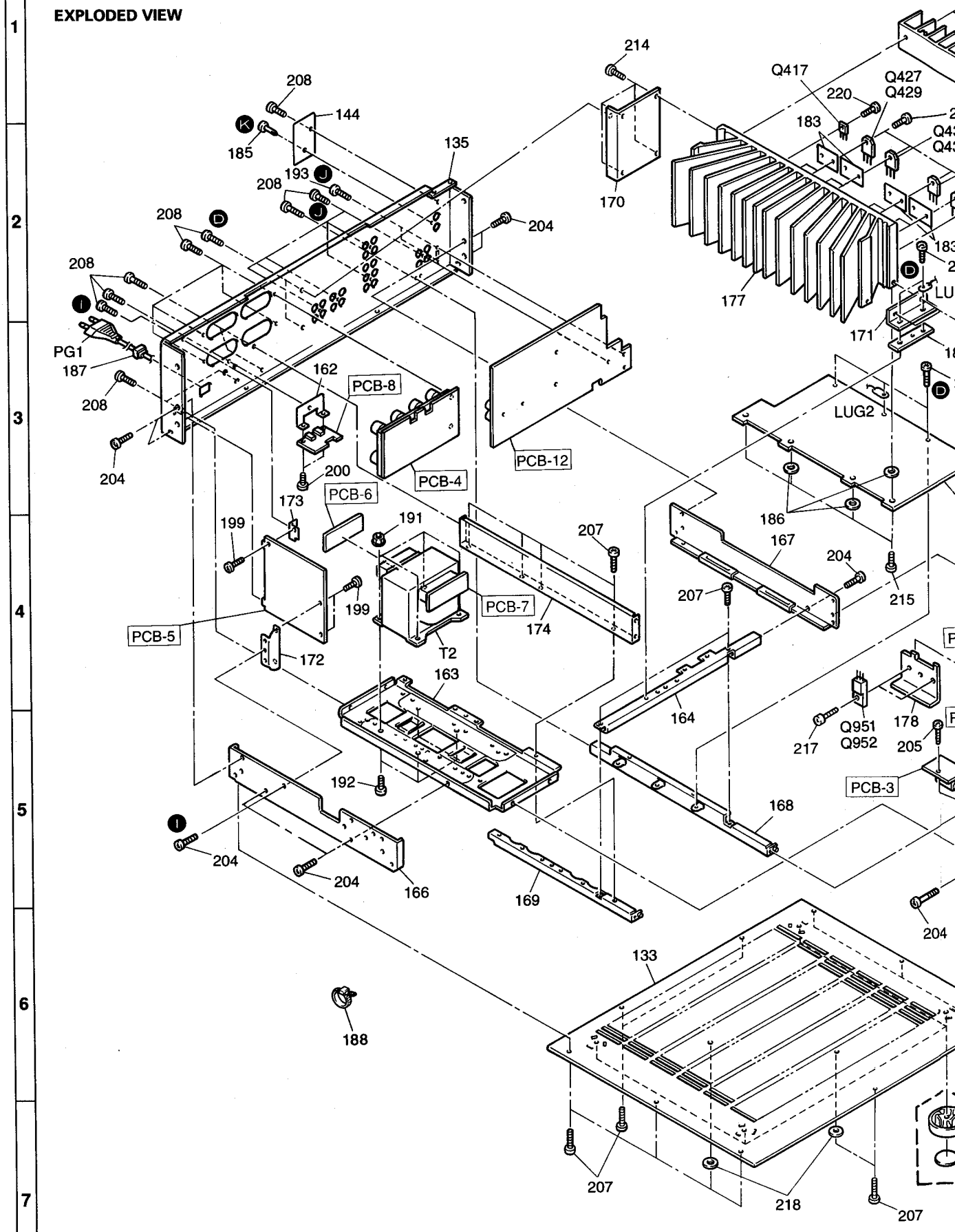
GENERAL UNIT

EXPLODED VIEW

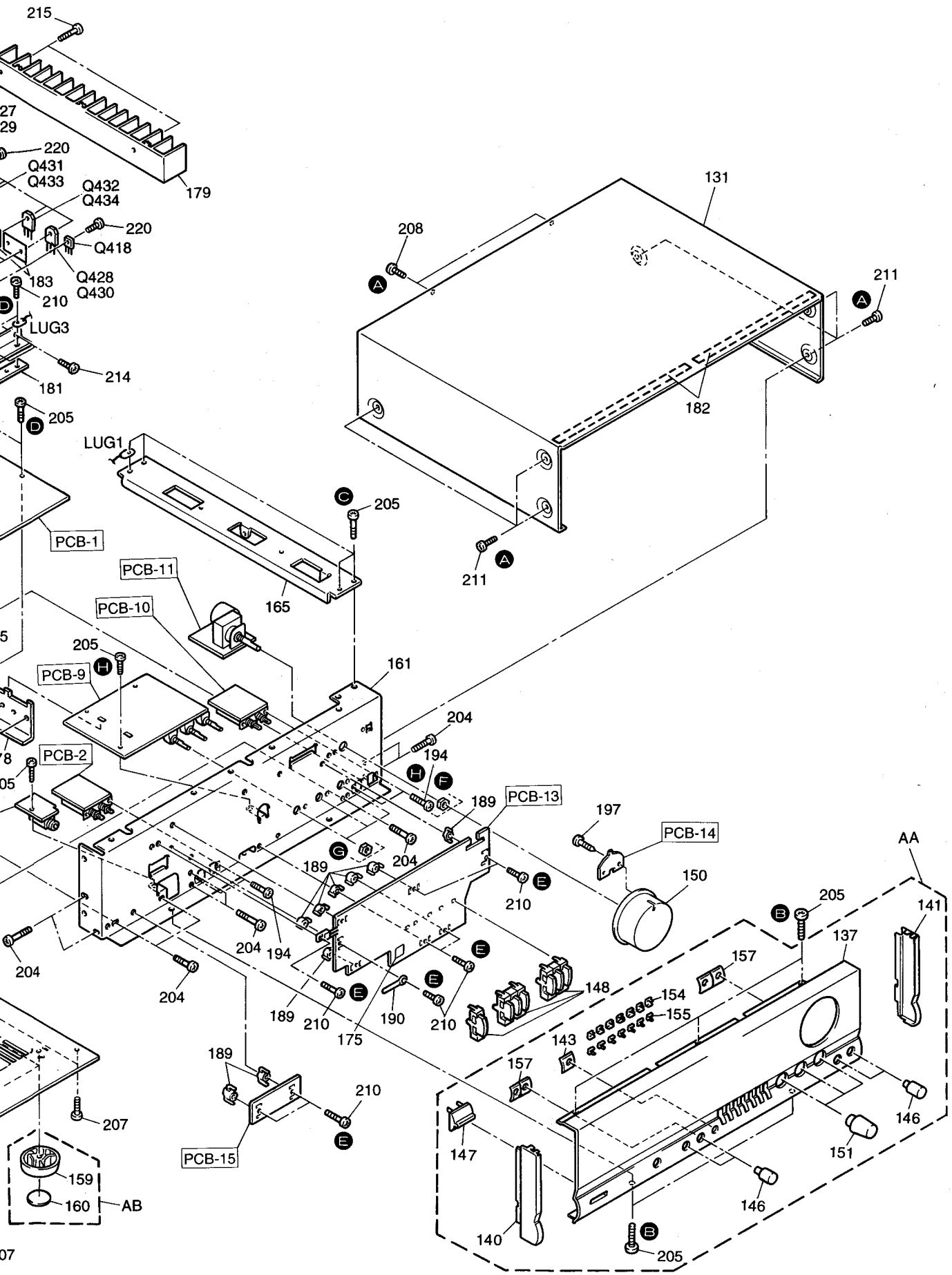


GENERAL UNIT

EXPLODED VIEW



F	G	H	I	J


215
220
Q431
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Q432
Q434
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Q418
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Q428
Q430
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LUG3
214
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LUG1
PCB-1
PCB-11
PCB-10
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PCB-9
PCB-2
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PCB-13
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PCB-14
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AA
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PCB-15
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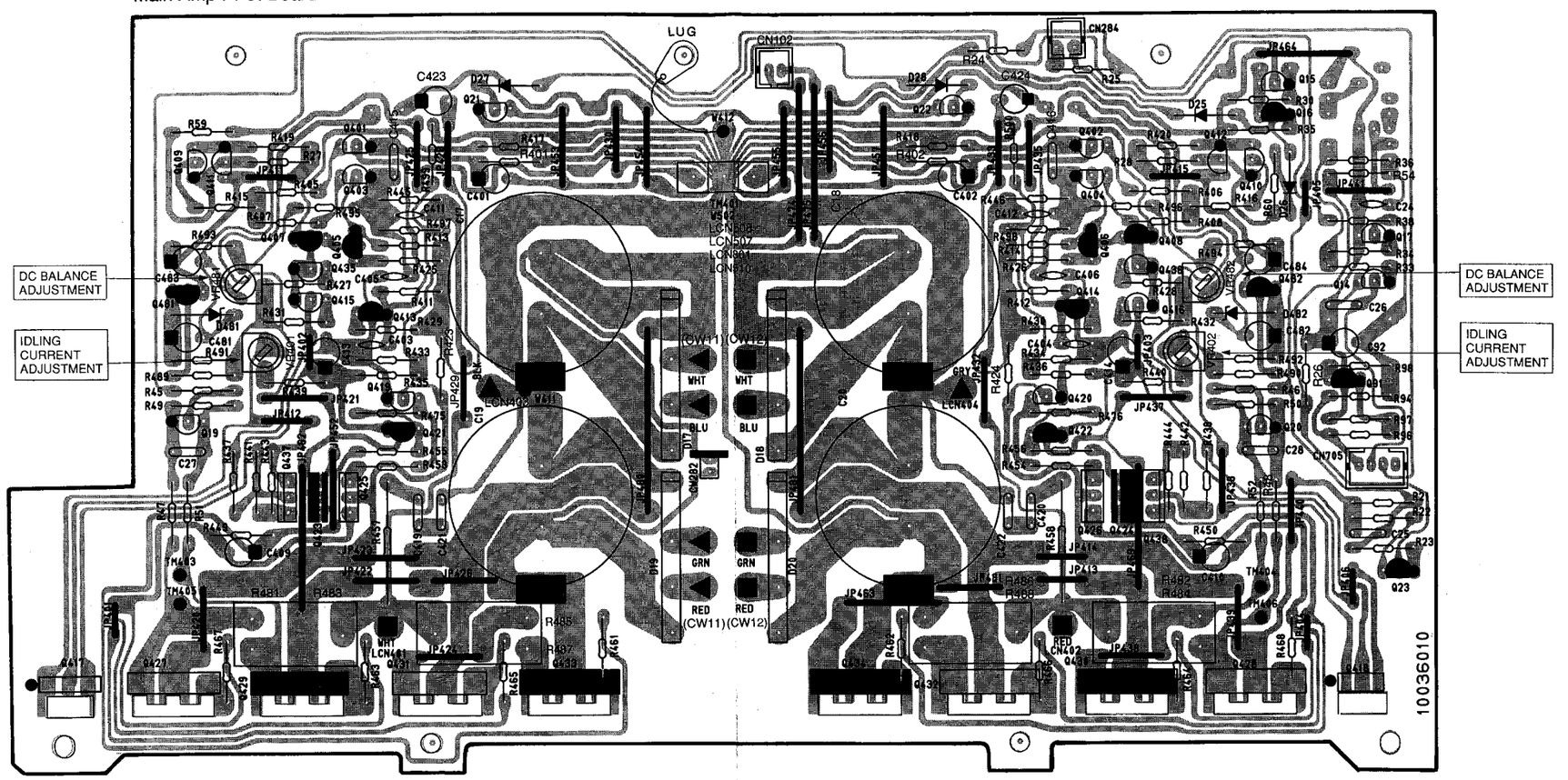
AB
07

P. C. BOARDS (1)

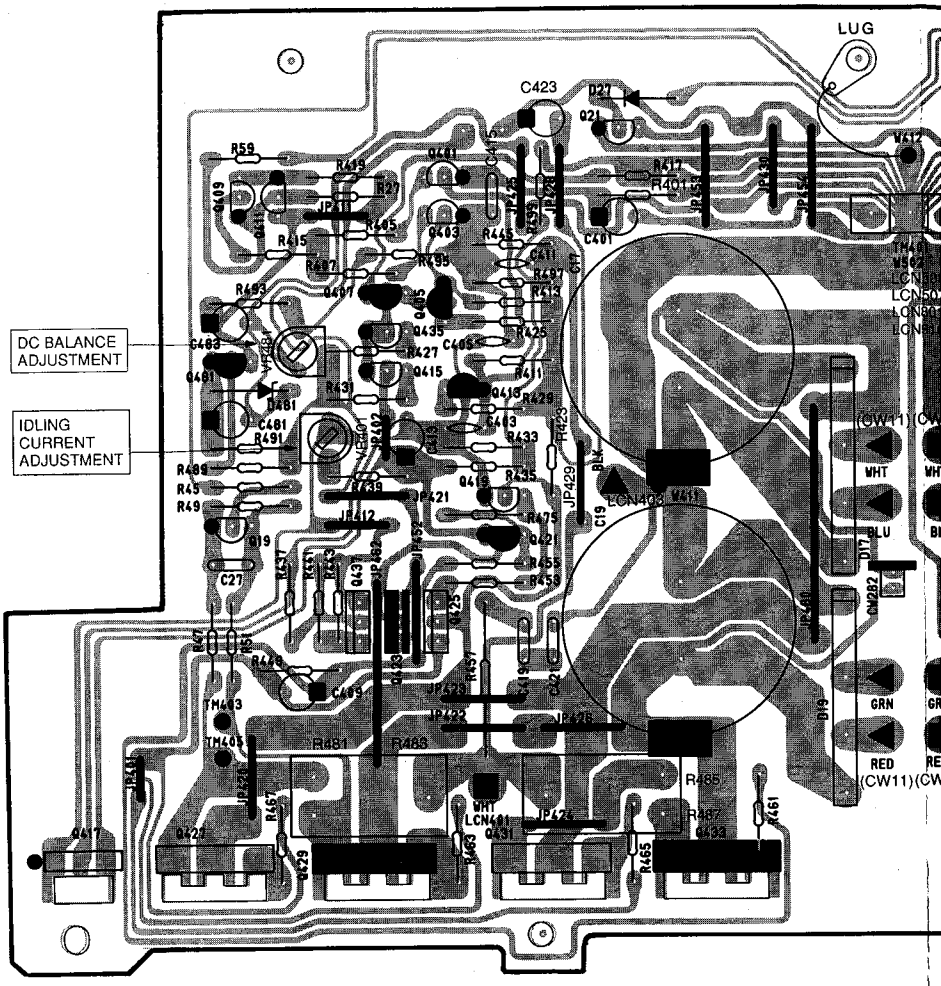
PCB-1

Main Amp P. C. Board

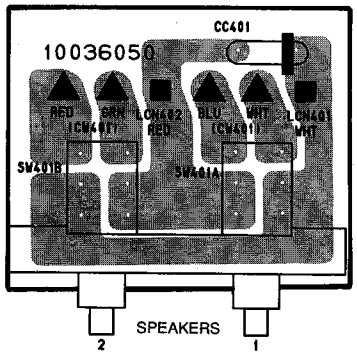


P. C. BOARDS (1)

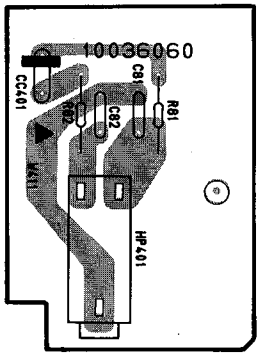
PCB-1
Main Amp P. C. Board

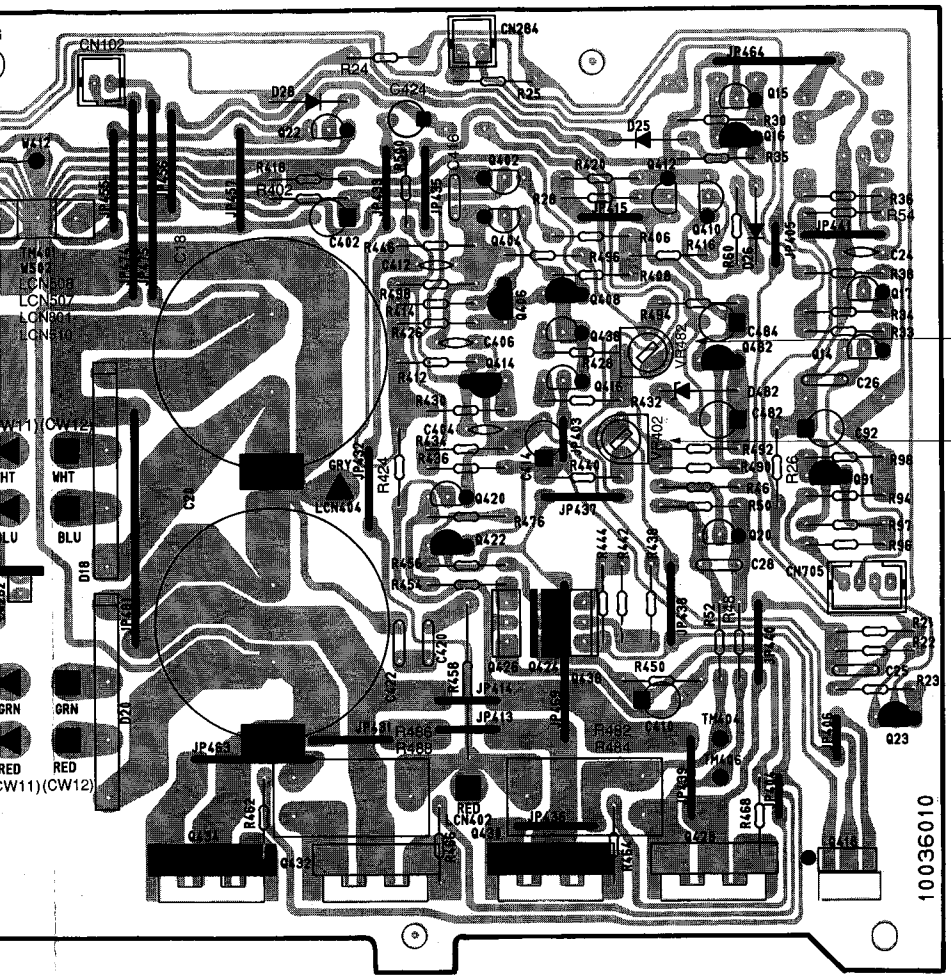


PCB-2
Speaker Switch P. C. Board



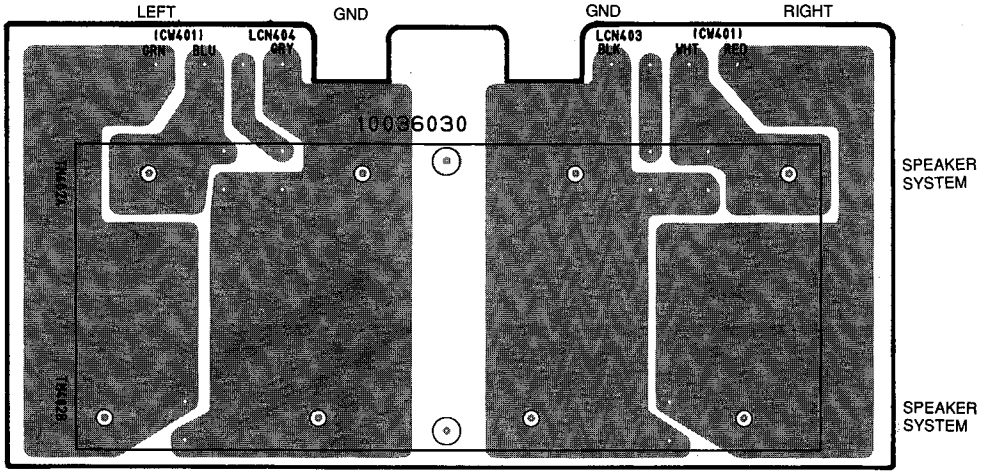
PCB-3
Headphones P. C. Board





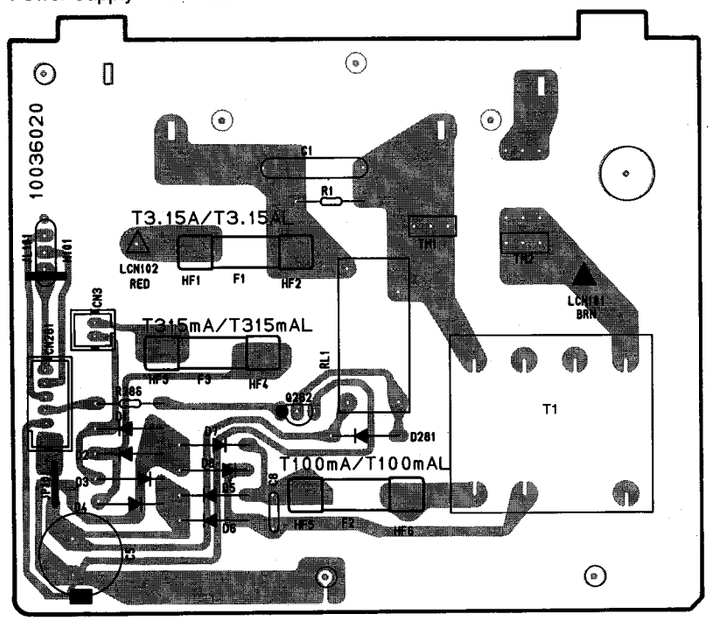
PCB-4

Speaker Terminal P. C. Board



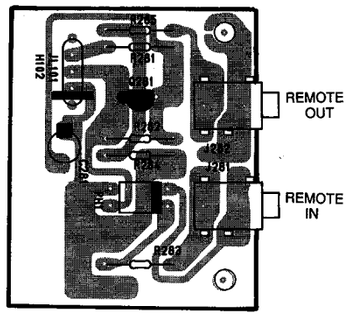
P. C. BOARDS (2)

PCB-5
Power Supply P. C. Board

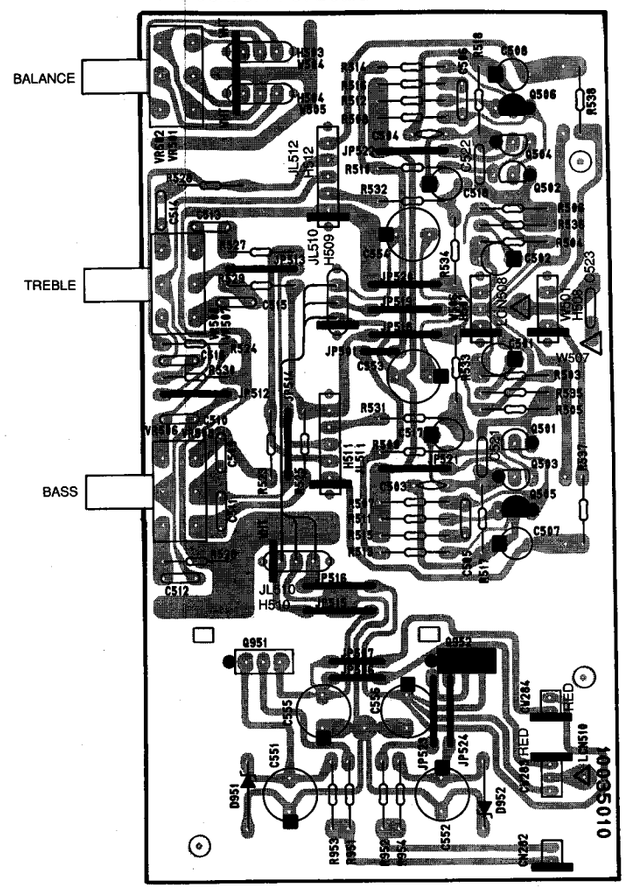


PCB-6
Primary P. C. Board

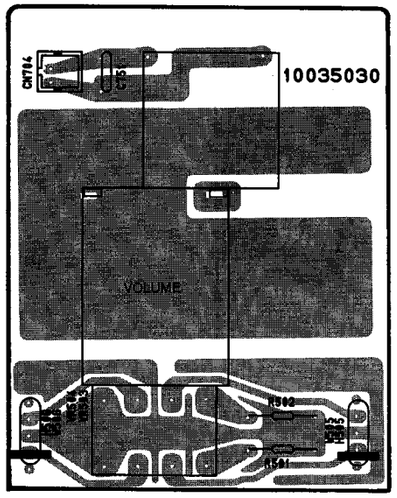
PCB-8
Remote In/Out P. C. Board



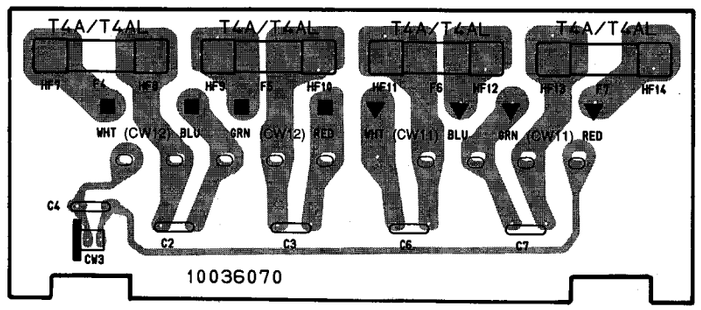
PCB-9
Tone Control P. C. Board



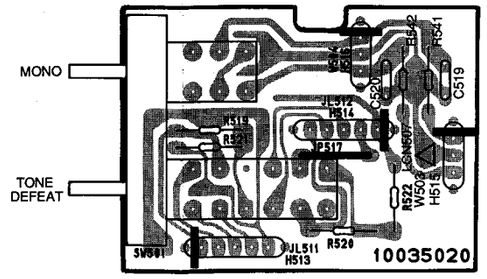
PCB-11
Volume P. C. Board



PCB-7
Secondary P. C. Board

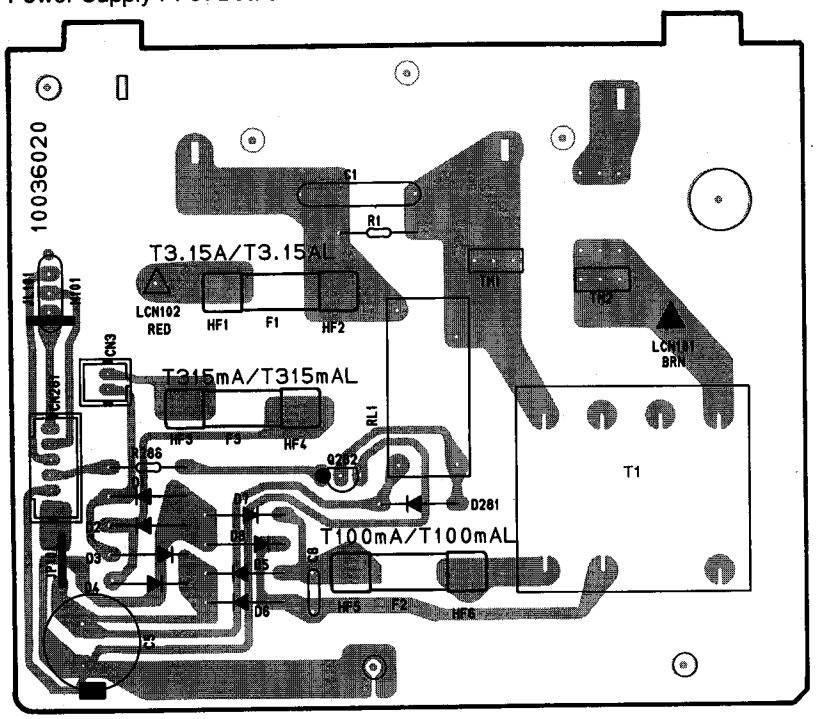


PCB-10
Mono/Stereo Switch P. C. Board

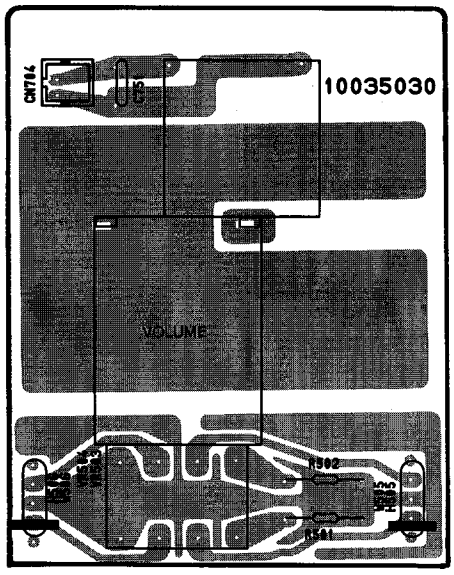


P. C. BOARDS (2)

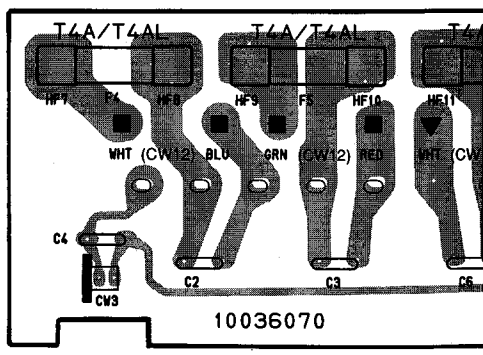
PCB-5
Power Supply P. C. Board



PCB-11
Volume P. C. Board

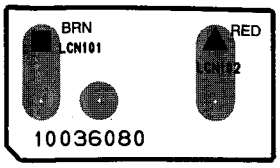


PCB-7
Secondary P. C. Board

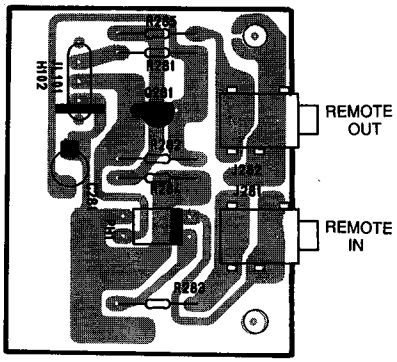


F G H I J

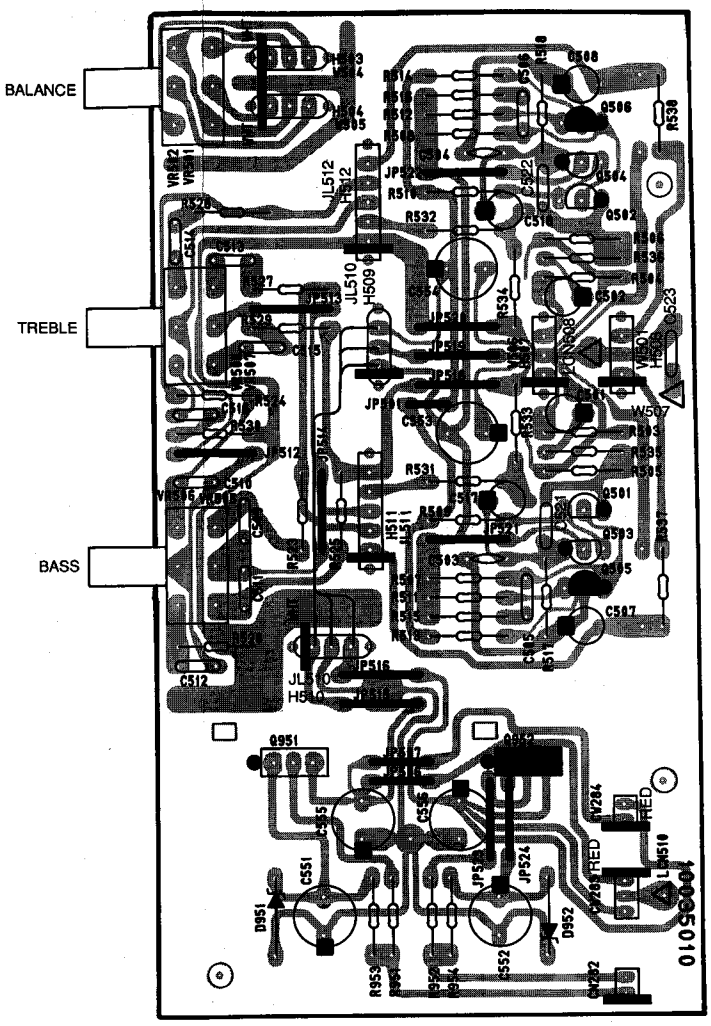
PCB-6
Primary P. C. Board

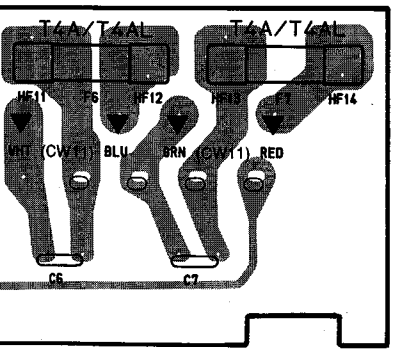


PCB-8
Remote In/Out P. C. Board

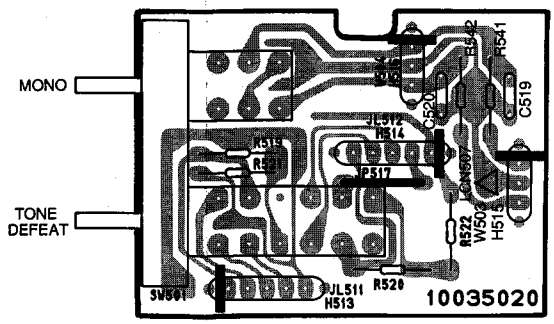


PCB-9
Tone Control P. C. Board



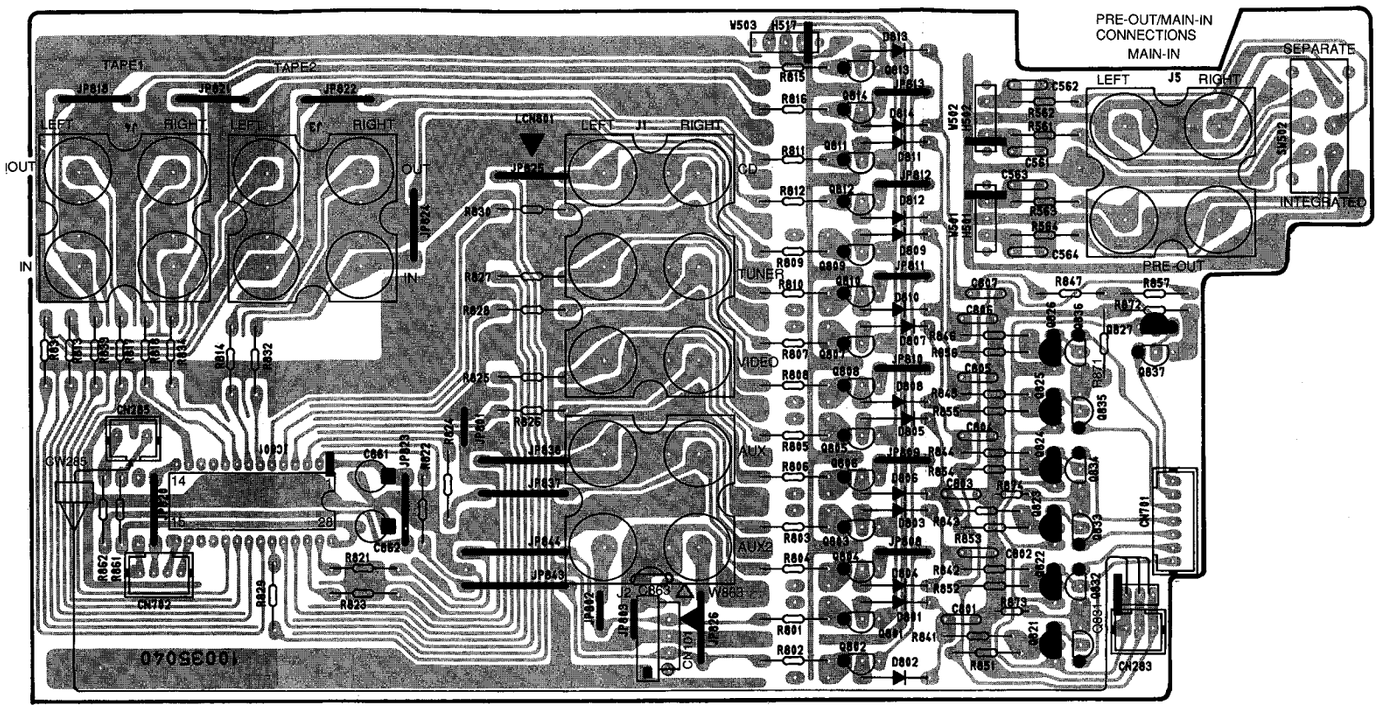


PCB-10
Mono/Stereo Switch P. C. Board

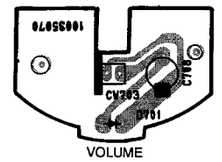


P. C. BOARDS (3)

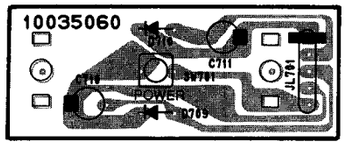
PCB-12
Control P. C. Board



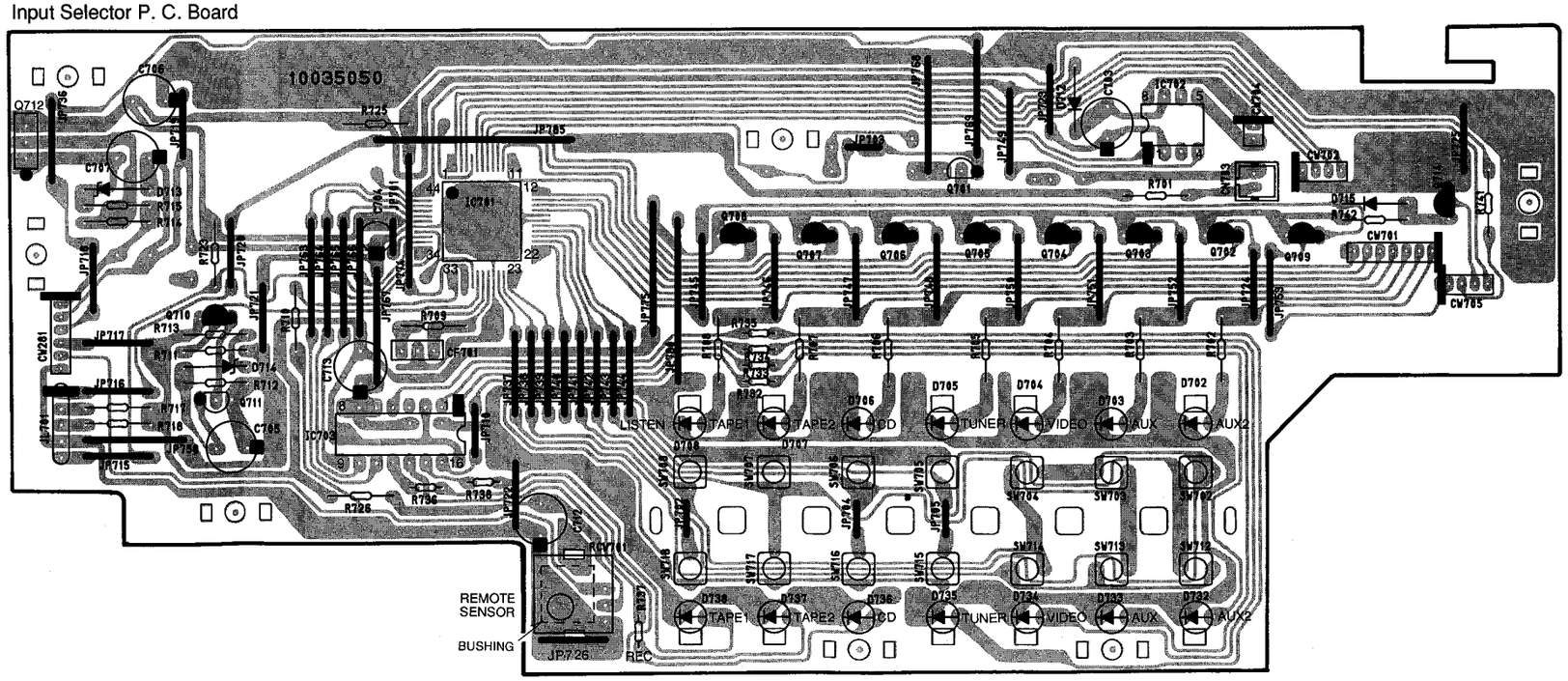
PCB-14
Volume LED P. C. Board



PCB-15
Power LED P. C. Board



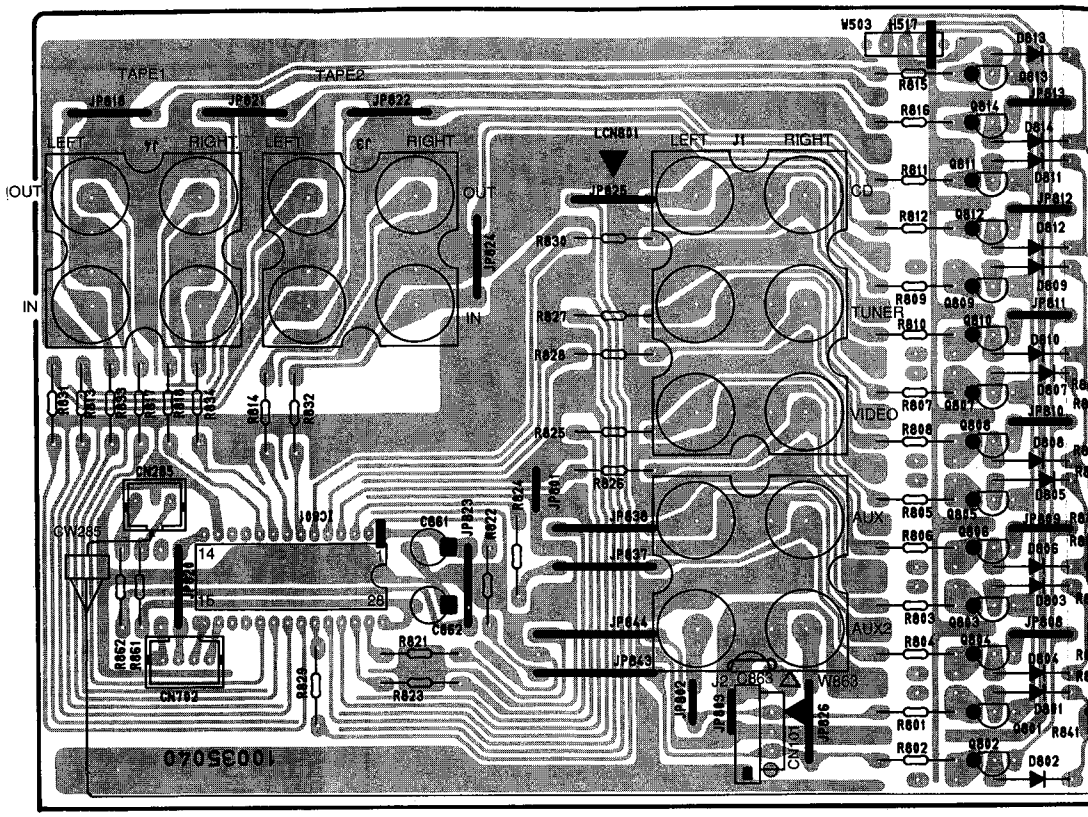
PCB-13
Input Selector P. C. Board



P. C. BOARDS (3)

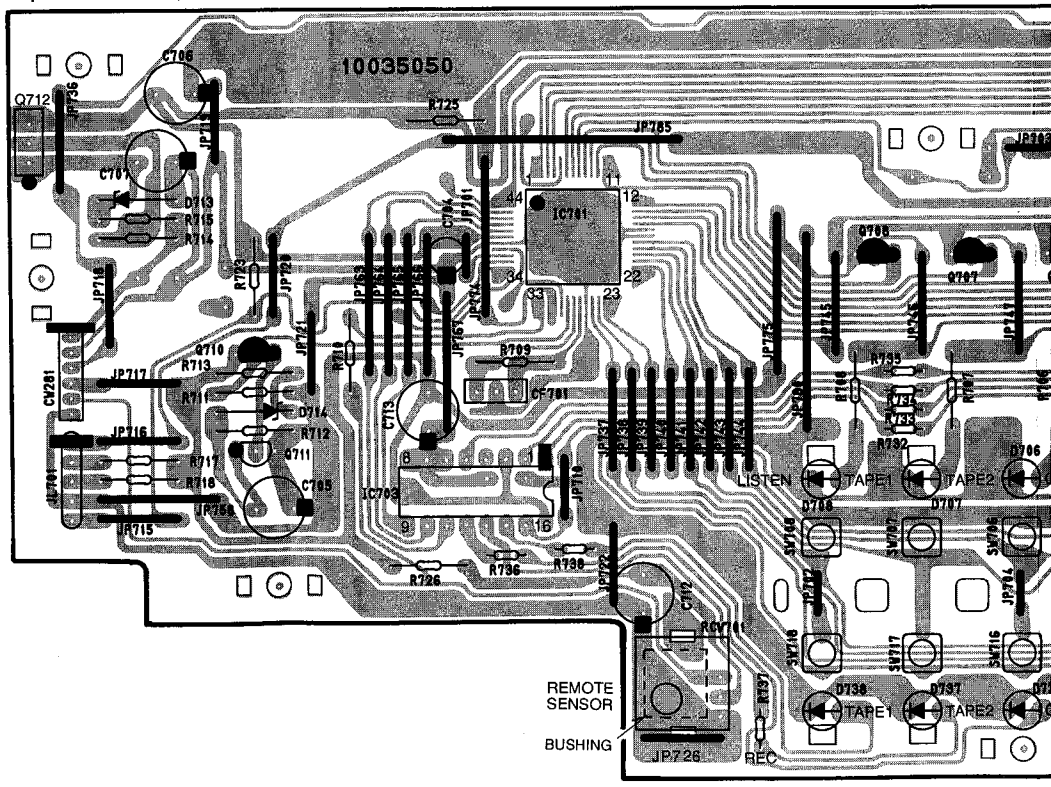
PCB-12

Control P. C. Board



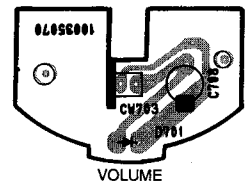
PCB-13

Input Selector P. C. Board



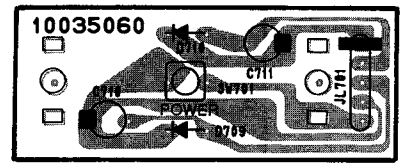
PCB-14

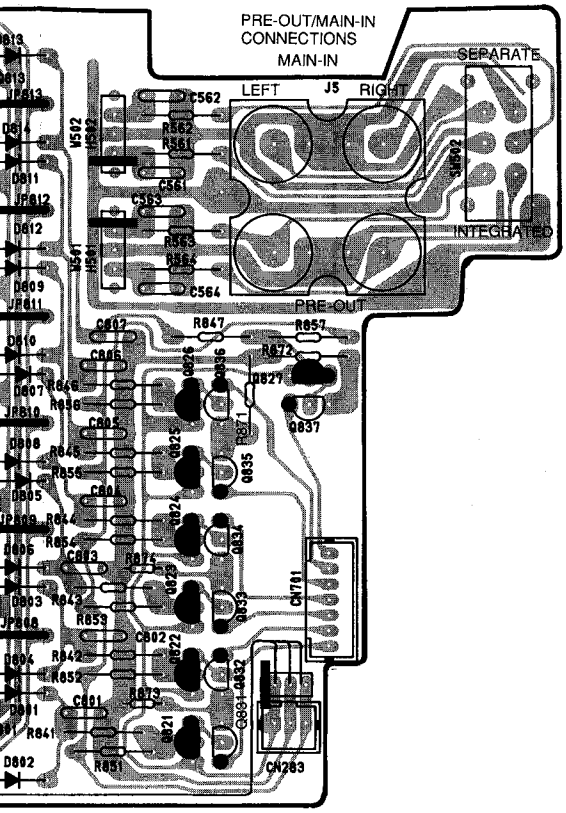
Volume LED P. C. Board

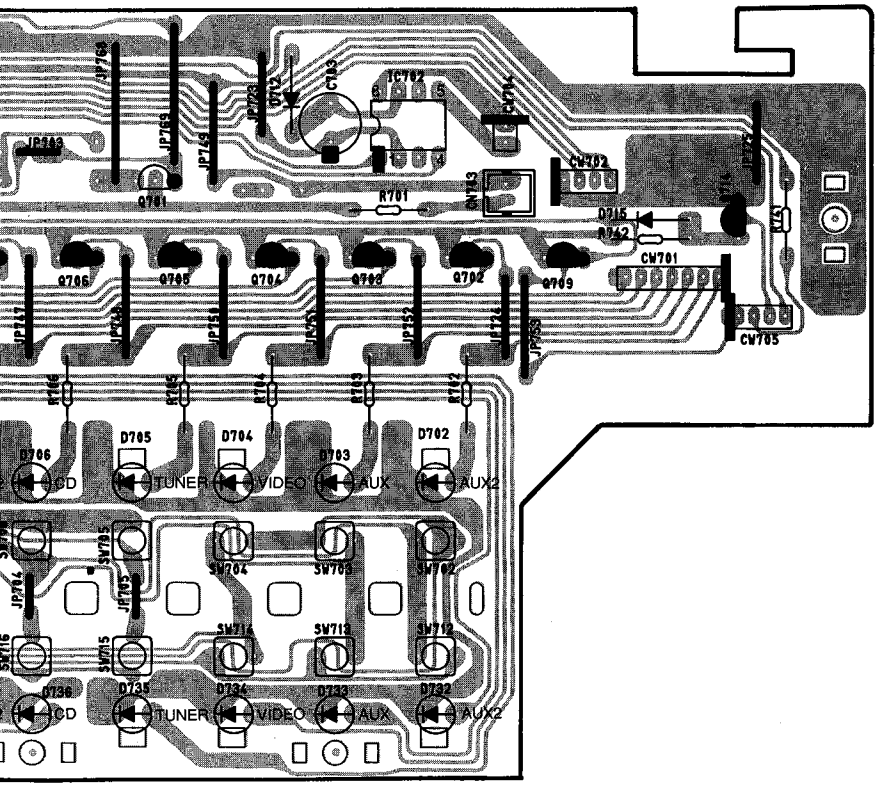


PCB-15

Power LED P. C. Board

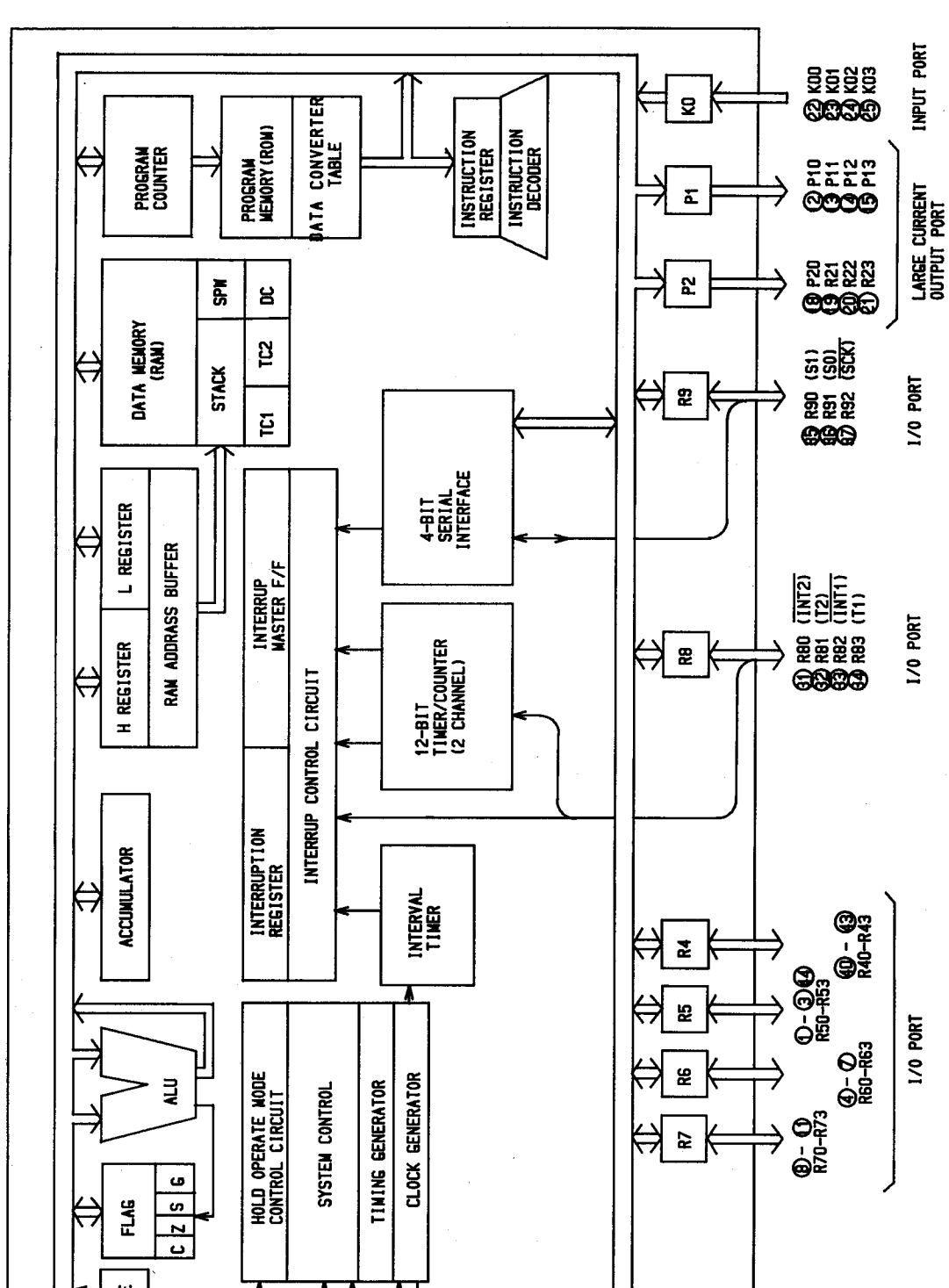






IC BLOCK DIAGRAM

IC701:TMP47C200BF
Micro Computer



IC701 : IC TERMINAL FUNCTION

Pin No.	Pin Name	I/O	Function
1	R51	I/O	4-bit w/latch input/output port
2	R52	I/O	4-bit w/latch input/output port
3	R53	I/O	4-bit w/latch input/output port
4	R60	I/O	4-bit w/latch input/output port
5	R61	I/O	4-bit w/latch input/output port
6	R62	I/O	4-bit w/latch input/output port
7	R63	I/O	4-bit w/latch input/output port
8	R70	I/O	4-bit w/latch input/output port
9	R71	I/O	4-bit w/latch input/output port
10	R72	I/O	4-bit w/latch input/output port
11	R73	I/O	4-bit w/latch input/output port
12	P10	O	4-bit w/latch output port
13	P11	O	4-bit w/latch output port
14	P12	O	4-bit w/latch output port
15	P13	O	4-bit w/latch output port
16	VSS	I	0V (GND)
17	N.C.	–	Non connect
18	P20	O	4-bit w/latch output port
19	P21	O	4-bit w/latch output port
20	P22	O	4-bit w/latch output port
21	P23	O	4-bit w/latch output port
22	K00	I	4-bit input port
23	K01	I	4-bit input port
24	K02	I	4-bit input port
25	K03	I	4-bit input port
26	TEST	I	Test point terminal
27	XIN	I	Crystal oscilator input
28	XOUT	O	Crystal oscilator output
29	$\overline{\text{RESET}}$	I	Reset signal input
30	HOLD(KEO)	I	Sens input
31	R80($\overline{\text{INT2}}$)	I/O	External interruption 2 input
32	R81(T2)	I/O	Timer/counter 2 input
33	R82($\overline{\text{INT1}}$)	I/O	External interruption 1 input
34	R83(T1)	I/O	4-bit w/latch input/output, timer/counter input
35	R90(SI)	I	Serial data input
36	R91(SO)	O	Serial data output
37	R92($\overline{\text{SCK}}$)	I/O	Serial clock input/output
38	N.C.	–	Non connect
39	VDD	I	+5V Power supply
40	R40	I/O	4-bit input/output port
41	R41	I/O	4-bit input/output port
42	R42	I/O	4-bit input/output port
43	R43	I/O	4-bit input/output port
44	R50	I/O	4-bit input/output port

ELECTRICAL PARTS LIST

Ser. No.		Ref. No.	Part No.	Description
			PCB-1 MAIN AMP P.C. BOARD	
			CAPACITORS	
721	⚠	C17	5341-S45GM828	CAP,ELE 8200μ/63V
721	⚠	C18	5341-S45GM828	CAP,ELE 8200μ/63V
721	⚠	C19	5341-S45GM828	CAP,ELE 8200μ/63V
721	⚠	C20	5341-S45GM828	CAP,ELE 8200μ/63V
661		C24	5354-104593	CAP,MYL .1μ
690		C25	5359-3325851	CAP,PPP 3300P
662		C26	5354-104593	CAP,MYL .1μ
663		C27	5354-124593	CAP,MYL .12μ
663		C28	5354-124593	CAP,MYL .12μ
680		C92	5345-S29DM476	CAP,MINI ELE 47μ/25V
601		C401	5345-S29BM107	CAP,MINI ELE 100μ/10V
601		C402	5345-S29BM107	CAP,MINI ELE 100μ/10V
652		C403	5353-100933	CAP,MCA 10P
652		C404	5353-100933	CAP,MCA 10P
602		C405	5353-050933	CAP,MCA 5P
602		C406	5353-050933	CAP,MCA 5P
603		C409	5345-S29GM106	CAP,MINI ELE 10μ/63V
603		C410	5345-S29GM106	CAP,MINI ELE 10μ/63V
604		C413	5345-S29CM106	CAP,MINI ELE 10μ/16V
604		C414	5345-S29CM106	CAP,MINI ELE 10μ/16V
723		C415	5353-330533	CAP,MCA 33P
723		C416	5353-330533	CAP,MCA 33P
605		C419	5354-104593	CAP,MYL .1μ
605		C420	5354-104593	CAP,MYL .1μ
605		C421	5354-104593	CAP,MYL .1μ
605		C422	5354-104593	CAP,MYL .1μ
641		C423	5345-S29GM105	CAP,MINI ELE 1μ/63V
641		C424	5345-S29GM105	CAP,MINI ELE 1μ/63V
606		C481	5345-S29DM476	CAP,MINI ELE 47μ/25V
606		C482	5345-S29DM476	CAP,MINI ELE 47μ/25V
606		C483	5345-S29DM476	CAP,MINI ELE 47μ/25V
606		C484	5345-S29DM476	CAP,MINI ELE 47μ/25V
			RESISTORS	
657		R21	5130-R030J473	RES,CBN 1/2P 47K
656		R22	5130-R030J152	RES,CBN 1/2P 1.5K
675		R23	5130-R030J223	RES,CBN 1/2P 22K
659		R24	5130-R030J105	RES,CBN 1/2P 1M
660		R25	5130-R030J154	RES,CBN 1/2P 150K
679		R26	5130-R030J103	RES,CBN 1/2P 10K
622		R27	5130-R030J104	RES,CBN 1/2P 100K
622		R28	5130-R030J104	RES,CBN 1/2P 100K
658		R30	5130-R030J683	RES,CBN 1/2P 68K
669		R33	5130-R030J104	RES,CBN 1/2P 100K
672		R34	5130-R030J472	RES,CBN 1/2P 4.7K
673		R35	5130-R030J223	RES,CBN 1/2P 22K
673		R36	5130-R030J223	RES,CBN 1/2P 22K
674		R38	5130-R030J683	RES,CBN 1/2P 68K
676		R45	5130-R030J472	RES,CBN 1/2P 4.7K
676		R46	5130-R030J472	RES,CBN 1/2P 4.7K
677		R47	5130-R030J182	RES,CBN 1/2P 1.8K
677		R48	5130-R030J182	RES,CBN 1/2P 1.8K
678		R49	5130-R030J681	RES,CBN 1/2P 680
678		R50	5130-R030J681	RES,CBN 1/2P 680
677		R51	5130-R030J182	RES,CBN 1/2P 1.8K
677		R52	5130-R030J182	RES,CBN 1/2P 1.8K
673		R54	5130-R030J223	RES,CBN 1/2P 22K
623		R59	5130-R030J123	RES,CBN 1/2P 12K
623		R60	5130-R030J123	RES,CBN 1/2P 12K
670		R94	5130-R030J104	RES,CBN 1/2P 100K
672		R96	5130-R030J472	RES,CBN 1/2P 4.7K
673		R97	5130-R030J223	RES,CBN 1/2P 22K
671		R98	5130-R030J333	RES,CBN 1/2P 33K
624		R401	5130-R030J273	RES,CBN 1/2P 27K
624		R402	5130-R030J273	RES,CBN 1/2P 27K
647	⚠	R405	5102-1015116	RES,FUSE 100
647	⚠	R406	5102-1015116	RES,FUSE 100
647	⚠	R407	5102-1015116	RES,FUSE 100
647	⚠	R408	5102-1015116	RES,FUSE 100
625		R411	5130-R030J102	RES,CBN 1/2P 1K
625		R412	5130-R030J102	RES,CBN 1/2P 1K
640	⚠	R413	5102-1025116	RES,FUSE 1K
640	⚠	R414	5102-1025116	RES,FUSE 1K
654		R415	5130-R030J472	RES,CBN 1/2P 4.7K
654		R416	5130-R030J472	RES,CBN 1/2P 4.7K
655	⚠	R417	5102-4705116	RES,FUSE 47
655	⚠	R418	5102-4705116	RES,FUSE 47
626		R419	5130-R030J271	RES,CBN 1/2P 270
626		R420	5130-R030J271	RES,CBN 1/2P 270
651	⚠	R423	5102-1005116	RES,FUSE 10
651	⚠	R424	5102-1005116	RES,FUSE 10
629	⚠	R425	5102-8205116	RES,FUSE 82
629	⚠	R426	5102-8205116	RES,FUSE 82
628	⚠	R427	5102-6805116	RES,FUSE 68
628	⚠	R428	5102-6805116	RES,FUSE 68
629	⚠	R429	5102-8205116	RES,FUSE 82
629	⚠	R430	5102-8205116	RES,FUSE 82
629	⚠	R431	5102-8205116	RES,FUSE 82
629	⚠	R432	5102-8205116	RES,FUSE 82
646		R433	5130-R030J153	RES,CBN 1/2P 15K
646		R434	5130-R030J153	RES,CBN 1/2P 15K
646		R435	5130-R030J153	RES,CBN 1/2P 15K
646		R436	5130-R030J153	RES,CBN 1/2P 15K
631		R437	5130-R030J182	RES,CBN 1/2P 1.8K
631		R438	5130-R030J182	RES,CBN 1/2P 1.8K
632		R439	5130-R030J561	RES,CBN 1/2P 560
632		R440	5130-R030J561	RES,CBN 1/2P 560
648		R441	5130-R030J122	RES,CBN 1/2P 1.2K
648		R442	5130-R030J122	RES,CBN 1/2P 1.2K
648		R443	5130-R030J122	RES,CBN 1/2P 1.2K
648		R444	5130-R030J122	RES,CBN 1/2P 1.2K
627		R445	5174-273381	RES,MTL 1/4P 27K
627		R446	5174-273381	RES,MTL 1/4P 27K
633	⚠	R449	5102-2215116	RES,FUSE 220
633	⚠	R450	5102-2215116	RES,FUSE 220
649	⚠	R453	5102-1015116	RES,FUSE 100
649	⚠	R454	5102-1015116	RES,FUSE 100
649	⚠	R455	5102-1015116	RES,FUSE 100
649	⚠	R456	5102-1015116	RES,FUSE 100
634		R457	5173-4R7583	RES,MTL 2P 4.7
634		R458	5173-4R7583	RES,MTL 2P 4.7
650	⚠	R461	5102-4R75116	RES,FUSE 4.7
650	⚠	R462	5102-4R75116	RES,FUSE 4.7
650	⚠	R463	5102-4R75116	RES,FUSE 4.7
650	⚠	R464	5102-4R75116	RES,FUSE 4.7
650	⚠	R465	5102-4R75116	RES,FUSE 4.7
650	⚠	R466	5102-4R75116	RES,FUSE 4.7
650	⚠	R467	5102-4R75116	RES,FUSE 4.7
650	⚠	R468	5102-4R75116	RES,FUSE 4.7
635	⚠	R475	5102-3915116	RES,FUSE 390
635	⚠	R476	5102-3915116	RES,FUSE 390
636		R481	5273-R22672	RES,CEM 3P .22
636		R482	5273-R22672	RES,CEM 3P .22
636		R483	5273-R22672	RES,CEM 3P .22
636		R484	5273-R22672	RES,CEM 3P .22
636		R485	5273-R22672	RES,CEM 3P .22
636		R486	5273-R22672	RES,CEM 3P .22
636		R487	5273-R22672	RES,CEM 3P .22
636		R488	5273-R22672	RES,CEM 3P .22
638		R489	5130-R030J562	RES,CBN 1/2P 5.6K
638		R490	5130-R030J562	RES,CBN 1/2P 5.6K
639		R491	5130-R030J223	RES,CBN 1/2P 22K
639		R492	5130-R030J223	RES,CBN 1/2P 22K
645		R493	5130-R030J473	RES,CBN 1/2P 47K
645		R494	5130-R030J473	RES,CBN 1/2P 47K
630		R495	5130-R030J563	RES,CBN 1/2P 56K
630		R496	5130-R030J563	RES,CBN 1/2P 56K
637		R497	5174-561381	RES,MTL 1/4P 560
637		R498	5174-561381	RES,MTL 1/4P 560
642		R499	5174-390381	RES,MTL 1/4P 39
642		R500	5174-390381	RES,MTL 1/4P 39
			TRANSISTORS	
665		Q14	5613-1740S(S)	XISTOR,NPN R
665		Q15	5613-1740S(S)	XISTOR,NPN R
666		Q16	5611-933S(S)	XISTOR,PNP R
665		Q17	5613-1740S(S)	XISTOR,NPN R
664		Q19	5613-2240(BL)	XISTOR,NPN R
664		Q20	5613-2240(BL)	XISTOR,NPN R

Ser. No.	Ref. No.	Part No.	Description
668	Q21	5616-2SK366BL	FET,N-CH
668	Q22	5616-2SK366BL	FET,N-CH
667	Q23	5611-970(BL)	XISTOR,PNP R
666	Q91	5611-933S(S)	XISTOR,PNP R
609	Q401	5613-1775(F)	XISTOR,NPN R
609	Q402	5613-1775(F)	XISTOR,NPN R
609	Q403	5613-1775(F)	XISTOR,NPN R
609	Q404	5613-1775(F)	XISTOR,NPN R
610	Q405	5612-646A(C)	XISTOR,PNP A
610	Q406	5612-646A(C)	XISTOR,PNP A
610	Q407	5612-646A(C)	XISTOR,PNP A
610	Q408	5612-646A(C)	XISTOR,PNP A
611	Q409	5613-2240(BL)	XISTOR,NPN R
611	Q410	5613-2240(BL)	XISTOR,NPN R
611	Q411	5613-2240(BL)	XISTOR,NPN R
611	Q412	5613-2240(BL)	XISTOR,NPN R
610	Q413	5612-646A(C)	XISTOR,PNP A
610	Q414	5612-646A(C)	XISTOR,PNP A
613	Q415	5614-666A(C)	XISTOR,NPN A
613	Q416	5614-666A(C)	XISTOR,NPN A
614	Q417	5613-3423(Y)	XISTOR,NPN R
614	Q418	5613-3423(Y)	XISTOR,NPN R
615	Q419	5614-667A(C)	XISTOR,NPN A
615	Q420	5614-667A(C)	XISTOR,NPN A
616	Q421	5612-647A(C)	XISTOR,PNP A
616	Q422	5612-647A(C)	XISTOR,PNP A
617	Q423	5611-1837(Y)	XISTOR,PNP R
617	Q424	5611-1837(Y)	XISTOR,PNP R
618	Q425	5613-4793(Y)	XISTOR,NPN R
618	Q426	5613-4793(Y)	XISTOR,NPN R
619	Q427	5613-3907(O)	XISTOR,NPN R
619	Q428	5613-3907(O)	XISTOR,NPN R
620	Q429	5611-1516(O)	XISTOR,PNP R
620	Q430	5611-1516(O)	XISTOR,PNP R
619	Q431	5613-3907(O)	XISTOR,NPN R
619	Q432	5613-3907(O)	XISTOR,NPN R
620	Q433	5611-1516(O)	XISTOR,PNP R
620	Q434	5611-1516(O)	XISTOR,PNP R
612	Q435	5613-1775(F)	XISTOR,NPN R
612	Q436	5613-1775(F)	XISTOR,NPN R
614	Q437	5613-3423(Y)	XISTOR,NPN R
614	Q438	5613-3423(Y)	XISTOR,NPN R
621	Q481	5611-970(BL)	XISTOR,PNP R
621	Q482	5611-970(BL)	XISTOR,PNP R
		DIODES	
722	⚠ D17	5685-D5SB20	SILICON,BRIG
722	⚠ D18	5685-D5SB20	SILICON,BRIG
722	⚠ D19	5685-D5SB20	SILICON,BRIG
722	⚠ D20	5685-D5SB20	SILICON,BRIG
607	D25	5631-1S2473	DIODE,DET
607	D26	5631-1S2473	DIODE,DET
607	D27	5631-1S2473	DIODE,DET
607	D28	5631-1S2473	DIODE,DET
608	D481	5635-HZ15-1L	DIODE,ZENER
608	D482	5635-HZ15-1L	DIODE,ZENER
		CONTROLS	
643	VR401	5101-S0801501	RES,SEMI FIX 500, IDRING CURRENT
643	VR402	5101-S0801501	RES,SEMI FIX 500, IDRING CURRENT
644	VR481	5101-S0801104	RES,SEMI FIX 100K, DC BALANCE
644	VR482	5101-S0801104	RES,SEMI FIX 100K, DC BALANCE
		MISCELLANEOUS	
889	CN102	4443-0201140	CONNECTOR, 2 PIN
888	CN284	4443-0201140	CONNECTOR, 2 PIN
884	CN705	4443-0401140	CONNECTOR, 4 PIN
892	CW11	4163-S5404451	CONNECTOR W/W, 4 PIN
892	CW12	4163-S5404451	CONNECTOR W/W, 4 PIN
906	CW282	4163-S0202351	CONNECTOR W/W, 2 PIN
913	LCN401	4163-0155027	CONNECTOR W/W, 1 PIN
914	LCN402	4163-0155025	CONNECTOR W/W, 1 PIN
915	LCN403	4163-0150024	CONNECTOR W/W, 1 PIN
916	LCN404	4163-0150026	CONNECTOR W/W, 1 PIN
686	TM401	4214-11031	TERMINAL, 3 PIN
689	TM403	4214-11022	TERMINAL
689	TM404	4214-11022	TERMINAL
957	W411	4122-00280601	WIRE
958	W412	4122-00420550	WIRE,LUG

PCB-2 SPEAKER SWITCH P.C. BOARD

		MISCELLANEOUS	
685	CC401	4132-R0110131	CORD,2C
912	CW401	4163-S5404451	CONNECTOR W/W, 4 PIN
684	SW401	4431-S0319204	SWITCH,PUSH, SPEAKERS 1/2

PCB-3 HEADPHONES P.C. BOARD

		CAPACITORS	
681	C81	5359-1015851	CAP,PPP 100P
681	C82	5359-1015851	CAP,PPP 100P
		RESISTORS	
683	R81	5130-R030J471	RES,CBN 1/2P 470
683	R82	5130-R030J471	RES,CBN 1/2P 470
		MISCELLANEOUS	
682	HP401	4451-51501	JACK,1P, HEADPHONES

PCB-4 SPEAKER TERMINAL P.C. BOARD

		MISCELLANEOUS	
687	TM402	4214-221	TERMINAL, SPEAKER SYSTEM

PCB-5 POWER SUPPLY P.C. BOARD

		CAPACITORS	
698	⚠ C1	5352-1030958	CAP,MTL .01μ
699	C5	5345-S29DM108	CAP,MINI ELE 1000μ/25V
697	C8	5354-104593	CAP,MYL .1μ
		RESISTORS	
711	⚠ R1	5130-R030J335	RES,CBN 1/2P 3.3M
716	R286	5130-R030J102	RES,CBN 1/2P 1K
		TRANSISTOR	
710	Q282	5613-3246(H)	XISTOR,NPN R
		DIODES	
701	⚠ D1	5632-S5566B	DIODE,RECT
701	⚠ D2	5632-S5566B	DIODE,RECT
701	⚠ D3	5632-S5566B	DIODE,RECT
701	⚠ D4	5632-S5566B	DIODE,RECT
701	⚠ D5	5632-S5566B	DIODE,RECT
701	⚠ D6	5632-S5566B	DIODE,RECT
701	⚠ D7	5632-S5566B	DIODE,RECT
701	⚠ D8	5632-S5566B	DIODE,RECT
702	D281	5631-1S2473	DIODE,DET
		MISCELLANEOUS	
879	CN3	4443-0201140	CONNECTOR, 2 PIN
885	CN281	4443-0601140	CONNECTOR, 6 PIN
703	⚠ F1	5732-01601312	FUSE, T3.15A/T3.15AL 250V
688	⚠ F2	5732-01601101	FUSE, T100mA/T100mAL 250V
704	⚠ F3	5732-01601311	FUSE, T315mA/T315mAL 250V
705	⚠ HF1	4472-04901	HOLDER,FUSE, F1
705	⚠ HF2	4472-04901	HOLDER,FUSE, F1
705	⚠ HF3	4472-04901	HOLDER,FUSE, F3
705	⚠ HF4	4472-04901	HOLDER,FUSE, F3
705	⚠ HF5	4472-04901	HOLDER,FUSE, F2
705	⚠ HF6	4472-04901	HOLDER,FUSE, F2
720	JL101	4242-R0503141	JUMPER LEAD, 3 WIRE
902	⚠ LCN101	4163-S5101200	CONNECTOR W/W, 1 PIN
903	⚠ LCN102	4163-S5201200	CONNECTOR W/W, 1 PIN
717	⚠ RL1	4331-02601	RELAY,DC

Ser. No.	Ref. No.	Part No.	Description
718	⚠ T1	5584-T1101	XFORMER, SUB
719	⚠ TM1	4214-245	TERMINAL
719	⚠ TM2	4214-245	TERMINAL
860		2240-Z032	HOLDER, H101
		PCB-7 SECONDARY P.C. BOARD	
		CAPACITORS	
725	C2	5352-S060K104	CAP,MTL .1μ
725	C3	5352-S060K104	CAP,MTL .1μ
726	C4	5354-104593	CAP,MYL .1μ
725	C6	5352-S060K104	CAP,MTL .1μ
725	C7	5352-S060K104	CAP,MTL .1μ
		MISCELLANEOUS	
893	CW3	4163-S0202301	CONNECTOR W/W, 2 PIN
696	⚠ F4	5732-01601402	FUSE, T4A/T4AL 250V
696	⚠ F5	5732-01601402	FUSE, T4A/T4AL 250V
696	⚠ F6	5732-01601402	FUSE, T4A/T4AL 250V
696	⚠ F7	5732-01601402	FUSE, T4A/T4AL 250V
695	⚠ HF7	4472-04901	HOLDER,FUSE, F4
695	⚠ HF8	4472-04901	HOLDER,FUSE, F4
695	⚠ HF9	4472-04901	HOLDER,FUSE, F5
695	⚠ HF10	4472-04901	HOLDER,FUSE, F5
695	⚠ HF11	4472-04901	HOLDER,FUSE, F6
695	⚠ HF12	4472-04901	HOLDER,FUSE, F6
695	⚠ HF13	4472-04901	HOLDER,FUSE, F7
695	⚠ HF14	4472-04901	HOLDER,FUSE, F7
		PCB-8 REMOTE IN/OUT P.C. BOARD	
		CAPACITOR	
700	C281	5345-476D041	CAP,MINI ELE 47μ/25V
		RESISTORS	
712	R281	5130-R030J470	RES,CBN 1/2P 47
713	R282	5130-R030J392	RES,CBN 1/2P 3.9K
714	R283	5130-R030J271	RES,CBN 1/2P 270
715	R284	5130-R030J473	RES,CBN 1/2P 47K
712	R285	5130-R030J470	RES,CBN 1/2P 47
		TRANSISTOR	
709	Q281	5611-A143ES	XISTOR,PNP R
		MISCELLANEOUS	
706	J281	4451-00184	JACK,1P, REMOTE IN
706	J282	4451-00184	JACK,1P, REMOTE OUT
708	PH1	5624-PC817	PHOTO COUPLER
861		2240-Z032	HOLDER, H102
		PCB-9 TONE CONTROL P.C. BOARD	
		CAPACITORS	
729	C501	5345-S29FM106	CAP,MINI ELE 10μ/50V
729	C502	5345-S29FM106	CAP,MINI ELE 10μ/50V
730	C503	5353-020933	CAP,MCA 2P
730	C504	5353-020933	CAP,MCA 2P
737	C505	5359-3315851	CAP,PPP 330P
737	C506	5359-3315851	CAP,PPP 330P
731	C507	5345-S29CM476	CAP,MINI ELE 47μ/16V
731	C508	5345-S29CM476	CAP,MINI ELE 47μ/16V
732	C509	5359-S010J273	CAP,PPP .027μ
732	C510	5359-S010J273	CAP,PPP .027μ
733	C511	5354-154593	CAP,MYL .15μ
733	C512	5354-154593	CAP,MYL .15μ
734	C513	5359-S010J682	CAP,PPP 6800P
734	C514	5359-S010J682	CAP,PPP 6800P
735	C515	5354-393593	CAP,MYL .039μ
735	C516	5354-393593	CAP,MYL .039μ
736	C517	5345-S29DM226	CAP,MINI ELE 22μ/25V
736	C518	5345-S29DM226	CAP,MINI ELE 22μ/25V
727	C521	5359-S010K101	CAP,PPP 100P
727	C522	5359-S010K101	CAP,PPP 100P
771	C523	5354-104593	CAP,MYL .1μ
738	C551	5345-S29DM227	CAP,MINI ELE 220μ/25V
738	C552	5345-S29DM227	CAP,MINI ELE 220μ/25V
738	C553	5345-S29DM227	CAP,MINI ELE 220μ/25V
738	C554	5345-S29DM227	CAP,MINI ELE 220μ/25V
738	C555	5345-S29DM227	CAP,MINI ELE 220μ/25V
738	C556	5345-S29DM227	CAP,MINI ELE 220μ/25V
		RESISTORS	
748	R503	5130-R030J224	RES,CBN 1/2P 220K
748	R504	5130-R030J224	RES,CBN 1/2P 220K
749	R505	5130-R030J394	RES,CBN 1/2P 390K
749	R506	5130-R030J394	RES,CBN 1/2P 390K
750	R507	5130-R030J681	RES,CBN 1/2P 680
750	R508	5130-R030J681	RES,CBN 1/2P 680
751	R509	5130-R030J822	RES,CBN 1/2P 8.2K
751	R510	5130-R030J822	RES,CBN 1/2P 8.2K
752	R511	5130-R030J220	RES,CBN 1/2P 22
752	R512	5130-R030J220	RES,CBN 1/2P 22
753	R513	5130-R030J272	RES,CBN 1/2P 2.7K
753	R514	5130-R030J272	RES,CBN 1/2P 2.7K
757	R515	5130-R030J101	RES,CBN 1/2P 100
757	R516	5130-R030J101	RES,CBN 1/2P 100
754	R517	5130-R030J274	RES,CBN 1/2P 270K
754	R518	5130-R030J274	RES,CBN 1/2P 270K
755	R523	5130-R030J153	RES,CBN 1/2P 15K
755	R524	5130-R030J153	RES,CBN 1/2P 15K
756	R525	5130-R030J272	RES,CBN 1/2P 2.7K
756	R526	5130-R030J272	RES,CBN 1/2P 2.7K
758	R527	5130-R030J122	RES,CBN 1/2P 1.2K
758	R528	5130-R030J122	RES,CBN 1/2P 1.2K
760	R529	5130-R030J331	RES,CBN 1/2P 330
760	R530	5130-R030J331	RES,CBN 1/2P 330
760	R531	5130-R030J331	RES,CBN 1/2P 330
760	R532	5130-R030J331	RES,CBN 1/2P 330
761	R533	5130-R030J473	RES,CBN 1/2P 47K
761	R534	5130-R030J473	RES,CBN 1/2P 47K
760	R535	5130-R030J331	RES,CBN 1/2P 330
760	R536	5130-R030J331	RES,CBN 1/2P 330
760	R537	5130-R030J331	RES,CBN 1/2P 330
760	R538	5130-R030J331	RES,CBN 1/2P 330
762	⚠ R951	5102-4R75116	RES,FUSE 4.7
762	⚠ R952	5102-4R75116	RES,FUSE 4.7
747	R953	5130-R030J472	RES,CBN 1/2P 4.7K
747	R954	5130-R030J472	RES,CBN 1/2P 4.7K
		TRANSISTORS	
742	Q501	5613-2320L(F)	XISTOR,NPN R
742	Q502	5613-2320L(F)	XISTOR,NPN R
742	Q503	5613-2320L(F)	XISTOR,NPN R
742	Q504	5613-2320L(F)	XISTOR,NPN R
743	Q505	5611-999L(F)	XISTOR,PNP R
743	Q506	5611-999L(F)	XISTOR,PNP R
745	Q951	5614-2012	XISTOR,NPN A
744	Q952	5612-1375	XISTOR,PNP A
		DIODES	
740	D951	5635-HZ15-2L	DIODE,ZENER
740	D952	5635-HZ15-2L	DIODE,ZENER
		CONTROLS	
764	VR501/502	5113-S0607104	RES, V CBN 16 100K, BALANCE
766	VR505/506	5113-10474148	RES, V CBN 16 100K, BASS
767	VR507/508	5113-50373148	RES, V CBN 16 50K, TREBLE
		MISCELLANEOUS	
886	CN282	4443-0201140	CONNECTOR, 2 PIN
907	CW283	4163-S0203451	CONNECTOR W/W, 3 PIN
908	CW284	4163-S0202181	CONNECTOR W/W, 2 PIN
691	JL510	4242-R0503700	JUMPER LEAD, 3 WIRE
741	JL511	4242-R0505131	JUMPER LEAD, 5 WIRE
741	JL512	4242-R0505131	JUMPER LEAD, 5 WIRE
956	LCN508	4163-S04401300	CONNECTOR W/W
917	LCN510	4163-S4401300	CONNECTOR W/W, 1 PIN
772	LUG3	4211-4	LUG, W509

Ser. No.	Ref. No.	Part No.	Description
953	W505	4142-00151201	SHLD WIRE,2C
773	W509	4122-00270101	WIRE
862		2240-Z031	HOLDER, H503, 504, 507, 508
864		2240-Z052	HOLDER, H511, 512
869		2240-Z032	HOLDER, H509, 510
		PCB-10 MONO/STEREO SWITCH P.C. BOARD	
		CAPACITORS	
728	C519	5359-1015851	CAP,PPP 100P
728	C520	5359-1015851	CAP,PPP 100P
		RESISTORS	
769	R519	5130-R030J153	RES,CBN 1/2P 15K
769	R520	5130-R030J153	RES,CBN 1/2P 15K
770	R521	5130-R030J272	RES,CBN 1/2P 2.7K
770	R522	5130-R030J272	RES,CBN 1/2P 2.7K
768	R541	5130-R030J102	RES,CBN 1/2P 1K
768	R542	5130-R030J102	RES,CBN 1/2P 1K
		MISCELLANEOUS	
955	LCN507	4163-S04401250	CONNECTOR W/W
763	SW501	4431-S0320206	SWITCH,PUSH, MONO/ TONE DEFEAT
952	W504	4142-00151141	SHLD WIRE,2C
865		2240-Z052	HOLDER, H513, 514
868		2240-Z031	HOLDER, H515, 516
		PCB-11 VOLUME P.C. BOARD	
		CAPACITOR	
739	C751	5354-104593	CAP,MYL .1μ
		RESISTORS	
746	R501	5130-R030J152	RES,CBN 1/2P 1.5K
746	R502	5130-R030J152	RES,CBN 1/2P 1.5K
		CONTROLS	
765	VR503/ 504	6161-00303	VR BLOCK, VOLUME
		MISCELLANEOUS	
883	CN704	4443-0201140	CONNECTOR, 2 PIN
954	W506	4142-00151201	SHLD WIRE,2C
863		2240-Z031	HOLDER, H505, 506
		PCB-12 CONTROL P.C. BOARD	
		CAPACITORS	
781	C561	5359-S010K101	CAP,PPP 100P
781	C562	5359-S010K101	CAP,PPP 100P
781	C563	5359-S010K101	CAP,PPP 100P
781	C564	5359-S010K101	CAP,PPP 100P
782	C801	5354-104593	CAP,MYL .1μ
782	C802	5354-104593	CAP,MYL .1μ
782	C803	5354-104593	CAP,MYL .1μ
782	C804	5354-104593	CAP,MYL .1μ
782	C805	5354-104593	CAP,MYL .1μ
782	C806	5354-104593	CAP,MYL .1μ
782	C807	5354-104593	CAP,MYL .1μ
783	C861	5345-S35DM476	CAP,MINI ELE 47μ/25V
783	C862	5345-S35DM476	CAP,MINI ELE 47μ/25V
804	C863	5359-S010J102	CAP,PPP 1000P
		RESISTORS	
800	R561	5130-R030J222	RES,CBN 1/2P 2.2K
800	R562	5130-R030J222	RES,CBN 1/2P 2.2K
799	R563	5130-R030J331	RES,CBN 1/2P 330
799	R564	5130-R030J331	RES,CBN 1/2P 330
793	R801	5130-R030J102	RES,CBN 1/2P 1K
793	R802	5130-R030J102	RES,CBN 1/2P 1K
793	R803	5130-R030J102	RES,CBN 1/2P 1K
793	R804	5130-R030J102	RES,CBN 1/2P 1K
793	R805	5130-R030J102	RES,CBN 1/2P 1K
793	R806	5130-R030J102	RES,CBN 1/2P 1K
793	R807	5130-R030J102	RES,CBN 1/2P 1K
793	R808	5130-R030J102	RES,CBN 1/2P 1K
793	R809	5130-R030J102	RES,CBN 1/2P 1K
793	R810	5130-R030J102	RES,CBN 1/2P 1K
793	R811	5130-R030J102	RES,CBN 1/2P 1K
794	R812	5130-R030J102	RES,CBN 1/2P 1K
794	R813	5130-R030J102	RES,CBN 1/2P 1K
794	R814	5130-R030J102	RES,CBN 1/2P 1K
794	R815	5130-R030J102	RES,CBN 1/2P 1K
794	R816	5130-R030J102	RES,CBN 1/2P 1K
794	R817	5130-R030J102	RES,CBN 1/2P 1K
794	R818	5130-R030J102	RES,CBN 1/2P 1K
794	R821	5130-R030J102	RES,CBN 1/2P 1K
794	R822	5130-R030J102	RES,CBN 1/2P 1K
794	R823	5130-R030J102	RES,CBN 1/2P 1K
794	R824	5130-R030J102	RES,CBN 1/2P 1K
795	R825	5130-R030J102	RES,CBN 1/2P 1K
795	R826	5130-R030J102	RES,CBN 1/2P 1K
795	R827	5130-R030J102	RES,CBN 1/2P 1K
795	R828	5130-R030J102	RES,CBN 1/2P 1K
795	R829	5130-R030J102	RES,CBN 1/2P 1K
795	R830	5130-R030J102	RES,CBN 1/2P 1K
795	R831	5130-R030J102	RES,CBN 1/2P 1K
795	R832	5130-R030J102	RES,CBN 1/2P 1K
795	R833	5130-R030J102	RES,CBN 1/2P 1K
795	R834	5130-R030J102	RES,CBN 1/2P 1K
796	R841	5130-R030J225	RES,CBN 1/2P 2.2M
796	R842	5130-R030J225	RES,CBN 1/2P 2.2M
796	R843	5130-R030J225	RES,CBN 1/2P 2.2M
796	R844	5130-R030J225	RES,CBN 1/2P 2.2M
796	R845	5130-R030J225	RES,CBN 1/2P 2.2M
796	R846	5130-R030J225	RES,CBN 1/2P 2.2M
796	R847	5130-R030J225	RES,CBN 1/2P 2.2M
797	R851	5130-R030J104	RES,CBN 1/2P 100K
797	R852	5130-R030J104	RES,CBN 1/2P 100K
797	R853	5130-R030J104	RES,CBN 1/2P 100K
797	R854	5130-R030J104	RES,CBN 1/2P 100K
797	R855	5130-R030J104	RES,CBN 1/2P 100K
797	R856	5130-R030J104	RES,CBN 1/2P 100K
797	R857	5130-R030J104	RES,CBN 1/2P 100K
798	⚠ R861	5102-1015116	RES,FUSE 100
798	⚠ R862	5102-1015116	RES,FUSE 100
795	R871	5130-R030J102	RES,CBN 1/2P 1K
795	R872	5130-R030J102	RES,CBN 1/2P 1K
803	R873	5130-R010J102	RES,CBN 1/6P 1K
803	R874	5130-R010J102	RES,CBN 1/6P 1K
		INTEGRATED CIRCUIT	
786	IC801	5654-TC9273N	IC,DIGITAL
		TRANSISTORS	
789	Q801	5616-2SK364BL	FET,N-CH
789	Q802	5616-2SK364BL	FET,N-CH
789	Q803	5616-2SK364BL	FET,N-CH
789	Q804	5616-2SK364BL	FET,N-CH
789	Q805	5616-2SK364BL	FET,N-CH
789	Q806	5616-2SK364BL	FET,N-CH
789	Q807	5616-2SK364BL	FET,N-CH
789	Q808	5616-2SK364BL	FET,N-CH
789	Q809	5616-2SK364BL	FET,N-CH
789	Q810	5616-2SK364BL	FET,N-CH
789	Q811	5616-2SK364BL	FET,N-CH
790	Q812	5616-2SK364BL	FET,N-CH
790	Q813	5616-2SK364BL	FET,N-CH
790	Q814	5616-2SK364BL	FET,N-CH
791	Q821	5611-A144ES	XISTOR,PNP R
791	Q822	5611-A144ES	XISTOR,PNP R
791	Q823	5611-A144ES	XISTOR,PNP R
791	Q824	5611-A144ES	XISTOR,PNP R
791	Q825	5611-A144ES	XISTOR,PNP R
791	Q826	5611-A144ES	XISTOR,PNP R
791	Q827	5611-A144ES	XISTOR,PNP R
792	Q831	5613-C144ES	XISTOR,NPN R
792	Q832	5613-C144ES	XISTOR,NPN R
792	Q833	5613-C144ES	XISTOR,NPN R
792	Q834	5613-C144ES	XISTOR,NPN R

Ser. No.	Ref. No.	Part No.	Description
792	Q835	5613-C144ES	XISTOR,NPN R
792	Q836	5613-C144ES	XISTOR,NPN R
792	Q837	5613-C144ES	XISTOR,NPN R
		DIODES	
784	D801	5631-1S2473	DIODE,DET
784	D802	5631-1S2473	DIODE,DET
784	D803	5631-1S2473	DIODE,DET
784	D804	5631-1S2473	DIODE,DET
784	D805	5631-1S2473	DIODE,DET
784	D806	5631-1S2473	DIODE,DET
784	D807	5631-1S2473	DIODE,DET
784	D808	5631-1S2473	DIODE,DET
784	D809	5631-1S2473	DIODE,DET
784	D810	5631-1S2473	DIODE,DET
784	D811	5631-1S2473	DIODE,DET
785	D812	5631-1S2473	DIODE,DET
785	D813	5631-1S2473	DIODE,DET
785	D814	5631-1S2473	DIODE,DET
		MISCELLANEOUS	
802	CN101	4443-030185	CONNECTOR, 3 PIN
887	CN283	4443-0301140	CONNECTOR, 3 PIN
887	CN285	4443-0301140	CONNECTOR, 3 PIN
880	CN701	4443-0701140	CONNECTOR, 7 PIN
881	CN702	4443-0401140	CONNECTOR, 4 PIN
909	CW285	4163-S0203181	CONNECTOR W/W, 3 PIN
788	J1	4486-16	PIN JACK,6P, VIDEO/ TUNER/CD
787	J2	4484-47	PIN JACK,4P, AUX/AUX 2
787	J3	4484-47	PIN JACK,4P, TAPE 2 IN/OUT
787	J4	4484-47	PIN JACK,4P, TAPE 1 IN/OUT
787	J5	4484-47	PIN JACK,4P, PRE-OUT/ MAIN-IN
918	LCN801	4163-0135020	CONNECTOR W/W, 1 PIN
806	LUG1	4122-4	LUG, W863
801	SW502	4421-02602022	SWITCH,SLIDE, INTEGRATED/ SEPARATE
949	W501	4142-00151451	SHLD WIRE,2C
950	W502	4142-00151301	SHLD WIRE,2C
951	W503	4142-00151451	SHLD WIRE,2C
805	W863	4122-00270121	WIRE
867		2240-Z031	HOLDER

PCB-13 INPUT SELECTOR P.C. BOARD

		CAPACITORS	
811	C703	5345-S35BM107	CAP,MINI ELE 100µ/10V
811	C704	5345-S35BM107	CAP,MINI ELE 100µ/10V
811	C705	5345-S35BM107	CAP,MINI ELE 100µ/10V
812	C706	5345-S35BM227	CAP,MINI ELE 220µ/10V
812	C707	5345-S35BM227	CAP,MINI ELE 220µ/10V
811	C712	5345-S35BM107	CAP,MINI ELE 100µ/10V
811	C713	5345-S35BM107	CAP,MINI ELE 100µ/10V
		RESISTORS	
834	R701	5130-R030J271	RES,CBN 1/2P 270
845	R702	5130-R030J681	RES,CBN 1/2P 680
845	R703	5130-R030J681	RES,CBN 1/2P 680
845	R704	5130-R030J681	RES,CBN 1/2P 680
845	R705	5130-R030J681	RES,CBN 1/2P 680
845	R706	5130-R030J681	RES,CBN 1/2P 680
845	R707	5130-R030J681	RES,CBN 1/2P 680
845	R708	5130-R030J681	RES,CBN 1/2P 680
836	R709	5130-R030J105	RES,CBN 1/2P 1M
837	R710	5130-R030J101	RES,CBN 1/2P 100
838	R711	5130-R030J103	RES,CBN 1/2P 10K
835	R712	5130-R030J471	RES,CBN 1/2P 470
839	R713	5130-R030J102	RES,CBN 1/2P 1K
840	⚠ R714	5102-4R75116	RES,FUSE 4.7
841	R715	5130-R030J392	RES,CBN 1/2P 3.9K
835	R717	5130-R030J471	RES,CBN 1/2P 470
835	R718	5130-R030J471	RES,CBN 1/2P 470
838	R723	5130-R030J103	RES,CBN 1/2P 10K
843	R725	5130-R030J104	RES,CBN 1/2P 100K
837	R726	5130-R030J101	RES,CBN 1/2P 100

Ser. No.	Ref. No.	Part No.	Description
844	R732	5130-R010J561	RES,CBN 1/6P 560
844	R733	5130-R010J561	RES,CBN 1/6P 560
844	R734	5130-R010J561	RES,CBN 1/6P 560
844	R735	5130-R010J561	RES,CBN 1/6P 560
844	R736	5130-R010J561	RES,CBN 1/6P 560
844	R737	5130-R010J561	RES,CBN 1/6P 560
844	R738	5130-R010J561	RES,CBN 1/6P 560
838	R741	5130-R030J103	RES,CBN 1/2P 10K
838	R742	5130-R030J103	RES,CBN 1/2P 10K
		INTEGRATED CIRCUITS	
826	IC701	5654-T7C2BF-1	IC,DIGITAL
827	IC702	5653-LB1639	IC,LINEAR
828	IC703	5654-TC4051BP	IC,DIGITAL
		TRANSISTORS	
829	Q701	5613-C114TS	XISTOR,NPN R
830	Q702	5611-A143ES	XISTOR,PNP R
830	Q703	5611-A143ES	XISTOR,PNP R
830	Q704	5611-A143ES	XISTOR,PNP R
830	Q705	5611-A143ES	XISTOR,PNP R
830	Q706	5611-A143ES	XISTOR,PNP R
830	Q707	5611-A143ES	XISTOR,PNP R
830	Q708	5611-A143ES	XISTOR,PNP R
830	Q709	5611-A143ES	XISTOR,PNP R
831	Q710	5611-A114ES	XISTOR,PNP R
832	Q711	5613-1740S(S)	XISTOR,NPN R
833	Q712	5614-2012	XISTOR,NPN A
846	Q714	5611-A124ES	XISTOR,PNP R
		DIODES	
821	D702	5637-S2410E6A	LED, AUX 2
821	D703	5637-S2410E6A	LED, AUX
821	D704	5637-S2410E6A	LED, VIDEO
821	D705	5637-S2410E6A	LED, TUNER
821	D706	5637-S2410E6A	LED, CD
821	D707	5637-S2410E6A	LED, TAPE 2
821	D708	5637-S2410E6A	LED, TAPE 1
823	D712	5631-1S2473	DIODE,DET
824	D713	5635-HZ6A2L	DIODE,ZENER
825	D714	5635-HZ3B2	DIODE,ZENER
823	D715	5631-1S2473	DIODE,DET
820	D732	5637-S2210S1A	LED, AUX 2
820	D733	5637-S2210S1A	LED, AUX
820	D734	5637-S2210S1A	LED, VIDEO
820	D735	5637-S2210S1A	LED, TUNER
820	D736	5637-S2210S1A	LED, CD
820	D737	5637-S2210S1A	LED, TAPE 2
820	D738	5637-S2210S1A	LED, TAPE 1
		MISCELLANEOUS	
816	CF701	5693-FC4004A4	OSC,CER
882	CN703	4443-0201140	CONNECTOR, 2 PIN
905	CW281	4163-S0206451	CONNECTOR W/W, 6 PIN
894	CW701	4163-S0207501	CONNECTOR W/W, 7 PIN
895	CW702	4163-S0204651	CONNECTOR W/W, 4 PIN
897	CW704	4163-S0202151	CONNECTOR W/W, 2 PIN
898	CW705	4163-S0204301	CONNECTOR W/W, 4 PIN
817	JL701	4242-R0105101	JUMPER LEAD, 5 WIRE
848	RCV701	6143-00804	RECEIV UNIT, REMOTE SENSOR
851	SW702	4437-01301	SWITCH,PU-TC, AUX 2
851	SW703	4437-01301	SWITCH,PU-TC, AUX
851	SW704	4437-01301	SWITCH,PU-TC, VIDEO
851	SW705	4437-01301	SWITCH,PU-TC, TUNER
851	SW706	4437-01301	SWITCH,PU-TC, CD
851	SW707	4437-01301	SWITCH,PU-TC, TAPE 2
851	SW708	4437-01301	SWITCH,PU-TC, TAPE 1
851	SW712	4437-01301	SWITCH,PU-TC, AUX 2
851	SW713	4437-01301	SWITCH,PU-TC, AUX
851	SW714	4437-01301	SWITCH,PU-TC, VIDEO
851	SW715	4437-01301	SWITCH,PU-TC, TUNER
852	SW716	4437-01301	SWITCH,PU-TC, CD
852	SW717	4437-01301	SWITCH,PU-TC, TAPE 2
852	SW718	4437-01301	SWITCH,PU-TC, TAPE 1

Ser. No.	Ref. No.	Part No.	Description
		PCB-14 VOLUME LED P.C. BOARD	
		CAPACITOR	
814	C708	5345-S35BM106	CAP,MINI ELE 10μ/10V
		DIODE	
819	D701	5637-SLR33MC3	LED, VOLUME
		MISCELLANEOUS	
896	CW703	4163-01524002	CONNECTOR W/W, 2 PIN
		PCB-15 POWER LED P.C. BOARD	
		CAPACITORS	
815	C710	5345-S35BM106	CAP,MINI ELE 10μ/10V
815	C711	5345-S35BM106	CAP,MINI ELE 10μ/10V
		DIODES	
822	D709	5637-S2410E1A	LED, POWER
822	D710	5637-S2410E1A	LED, POWER
		MISCELLANEOUS	
849	SW701	4437-00704	SWITCH,PU-TC, POWER
		CHASSIS MISCELLANEOUS	
858	LUG2	4211-4	LUG, W-412
707 ⚠	PG1	4161-71150	CORD W/PLUG
946	PCB-6	4551-10036080	PC BOARD, PRIMARY
694 ⚠	T2	5584-T4305	XFORMER, POWER
		PACKING PARTS LIST	
021A		1756-23601	LABEL, (I)CARTON ●
108		1111-1640J152	OWNER GUIDE
116		1756-03108	LABEL, (I)CARTON (X2)
120		1241-R0165751	POLYETHY BAG, SET
121		1241-R0123351	POLYETHY BAG, IB
122		1223-R0425035	SOFT SHEET, AC CORD
123		1221-31401	CARTON BOX, ACCESSORY
124		1221-35801	CARTON BOX, SET
125		1222-7412	CUSHION, REAR PAD (x3)
126		1222-7225	CUSHION, L
127		1222-7226	CUSHION, R
128		1223-R0420055	SOFT SHEET, SET FRONT
923		4191-0355	BATTERY,DRY
924		4161-08201102	CORD W/PLUG, REMOTE IN/OUT (x3)
925		6142-08101	CONT BLOCK, REMOTE CONTROL

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE : Electrolytic
CAP, CER : Ceramic
CAP, PPP : Polypropylene
CAP, MYL : Mylar
CAP, MCA : Mica
470μ : 470μF
6800P : 6800pF
.047μ : 0.047μF

RESISTORS

RES, CBN 1/6P : Carbon 1/6W
2.2K : 2.2kΩ
220 : 220Ω
RES, FUSE : Fuse
RES, CEM 5P : Cement 5W
RES, MTL 1P : Metal 1W

TRANSISTORS

XISTOR : Transistor
FET : Field Effect Transistor

CONTROLS

RES, V CBN : Variable Carbon Resistor
RES, SEMI FIX : Semi - fixed Resistors

NOTE:
⚠ SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

SCHEMATIC DIAGRAM (1)

Type	R1	R2
DTC144ES	47K	47K

Type	R1	R2
DTA114ES	10K	10K
DTA124ES	22K	22K
DTA143ES	4.7K	4.7K
DTA144ES	47K	47K

Type	R1
DTC114TS	10K

NOTE

1.ALL RESISTANCES VALUES ARE IN ohm .
Kohm=1000ohm.Mohm=1000Kohm.

2.THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.

3.ALL CAPACITANCES VALUES ARE IN uF UNLESS OTHERWISE NOTED.P=uuF.

4....V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.

5.SAFTEY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS.THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGNAL PARTS.

PCB-1 MAIN AMP

PCB-2 SPEAKER SWITCH

PCB-4 SPEAKER TERMINAL

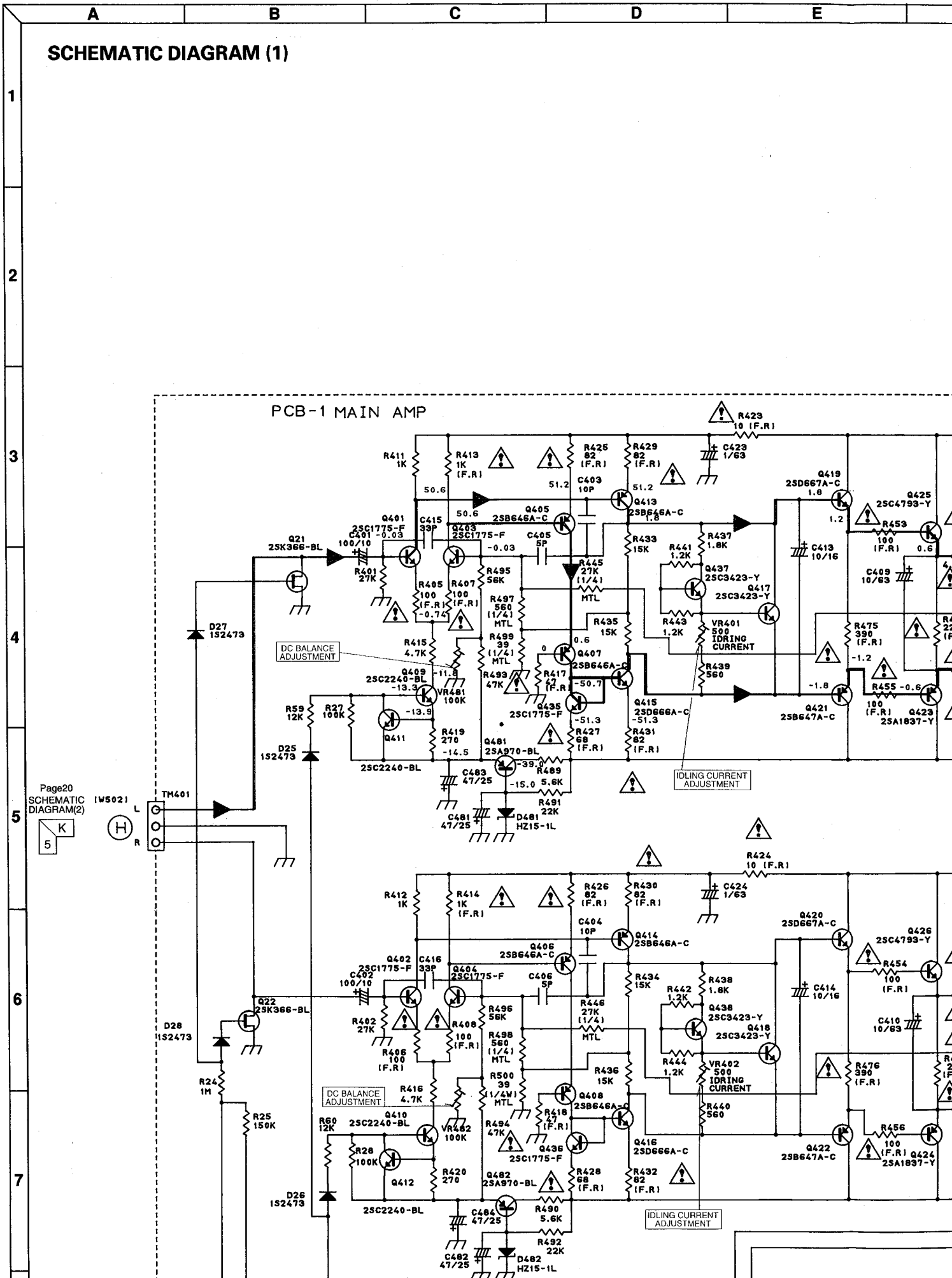
PCB-7 SECONDARY

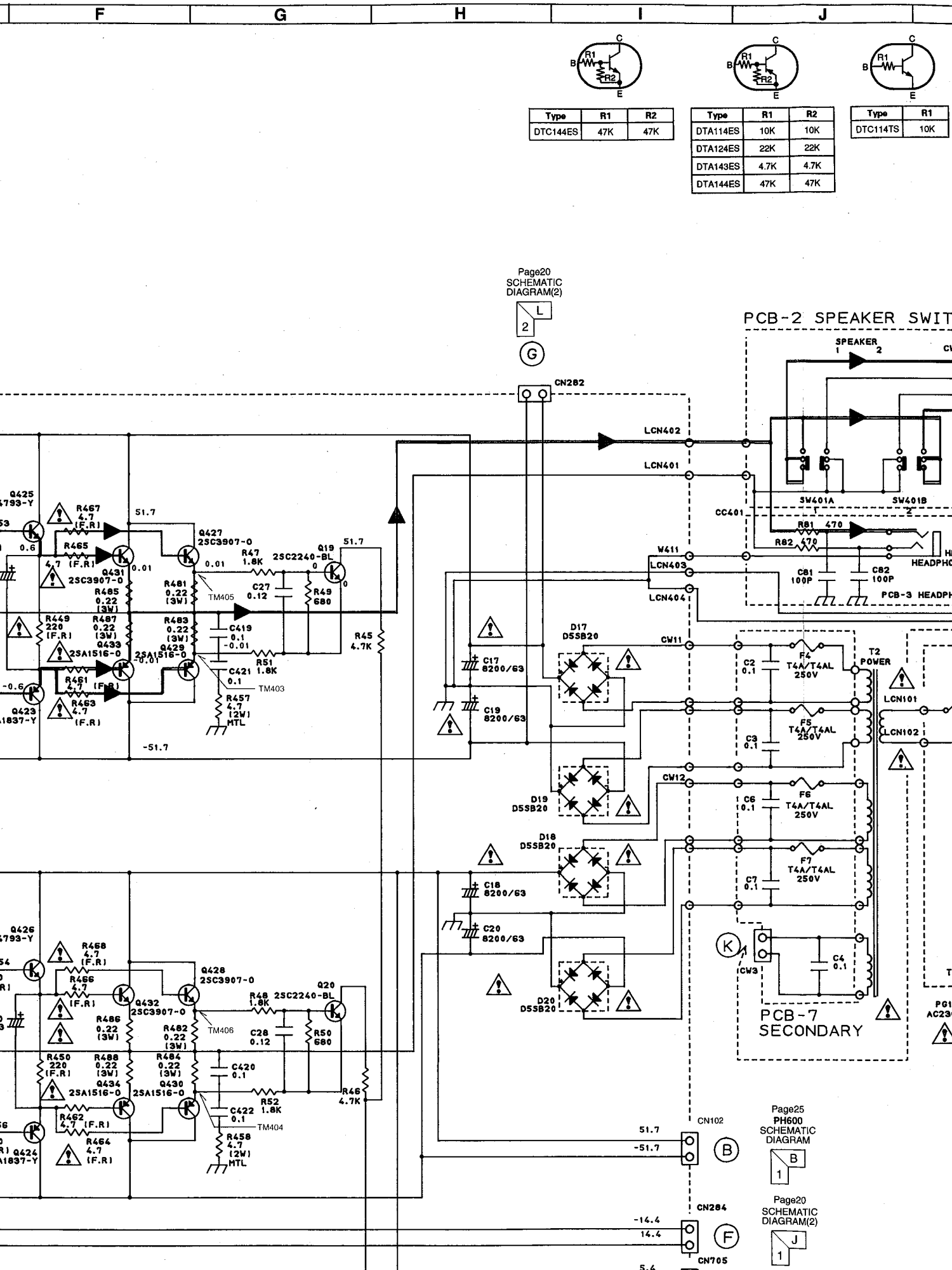
PCB-5 POWER SUPPLY

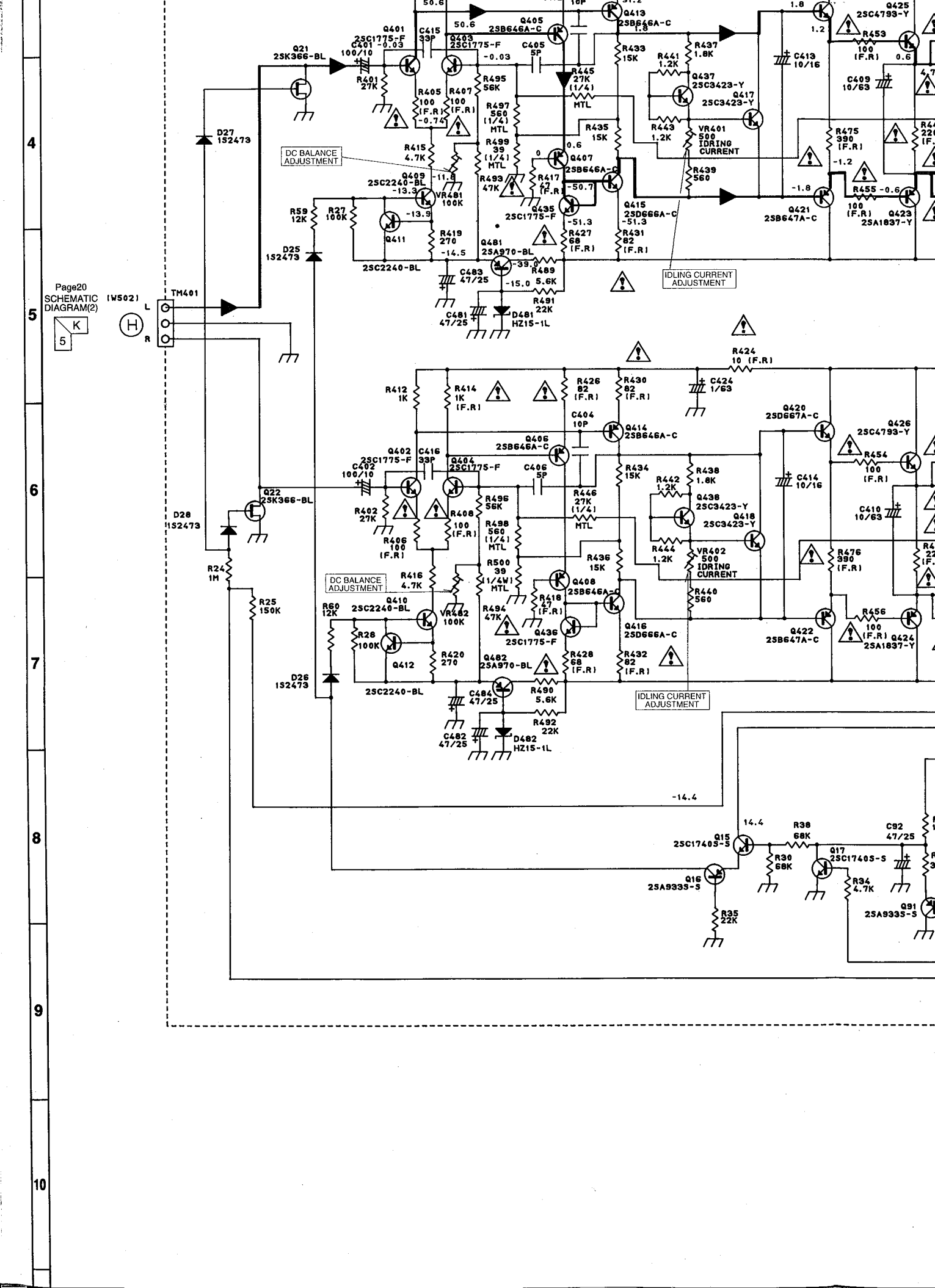
PCB-8 REMOTE IN/OUT

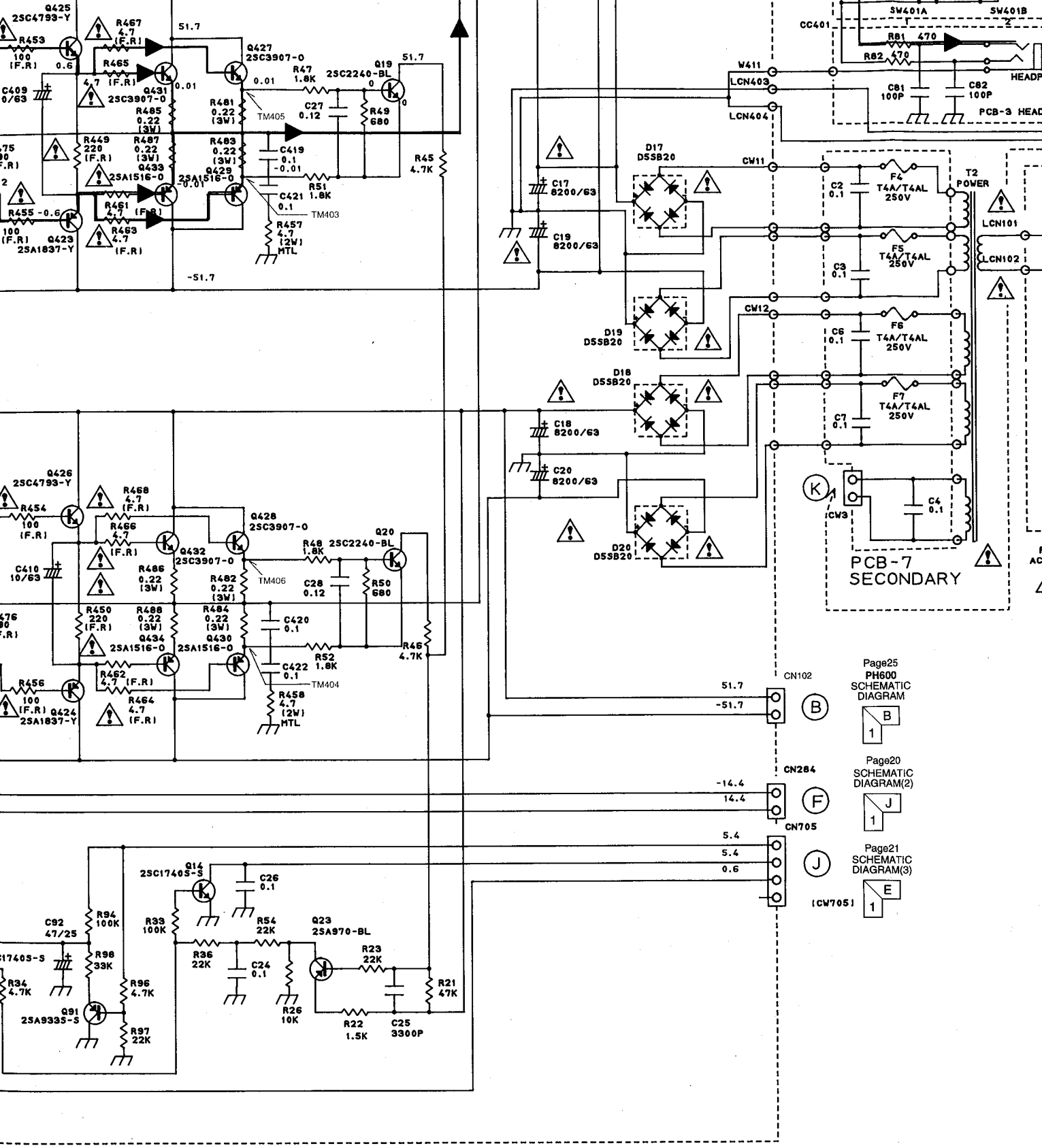
Page20 SCHEMATIC DIAGRAM(2) L 2 G
Page20 SCHEMATIC DIAGRAM(2) (W502) K 5 H
Page21 SCHEMATIC DIAGRAM(3) A 2 L (CW281)
Page25 PH600 SCHEMATIC DIAGRAM B 1
Page20 SCHEMATIC DIAGRAM(2) J 1 F
Page21 SCHEMATIC DIAGRAM(3) E 1 (CW705)

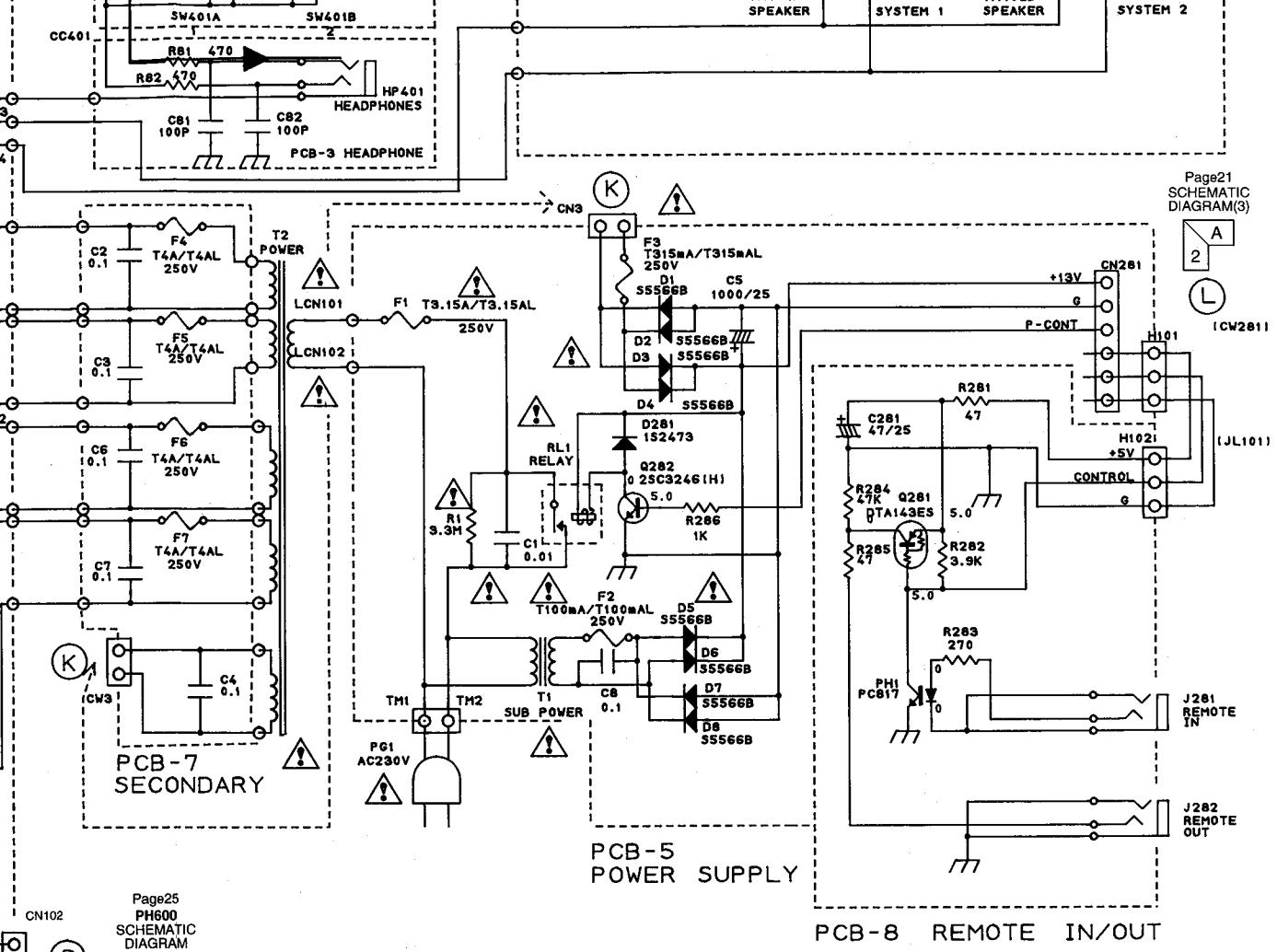
SCHEMATIC DIAGRAM (1)



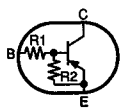

F
G
H
I
J
C
R1
B
R2
E
Type R1 R2
DTC144ES 47K 47K
Type R1 R2
DTA114ES 10K 10K
DTA124ES 22K 22K
DTA143ES 4.7K 4.7K
DTA144ES 47K 47K
Type R1
DTC114TS 10K
Page20
SCHEMATIC
DIAGRAM(2)
L
2
G
PCB-2 SPEAKER SWITCH
SPEAKER
1
2
CW401
CN282
LCN402
LCN401
SW401A
SW401B
CC401
R81 470
R82 470
W411
LCN403
LCN404
HP401
HEADPHONES
C81 100P
C82 100P
PCB-3 HEADPHONE
CW11
CW12
CW13
D17 D5SB20
D18 D5SB20
D19 D5SB20
D20 D5SB20
C17 8200/63
C18 8200/63
C19 8200/63
C20 8200/63
C2 0.1
C3 0.1
C6 0.1
C7 0.1
C4 0.1
F4 T4A/T4AL 250V
F5 T4A/T4AL 250V
F6 T4A/T4AL 250V
F7 T4A/T4AL 250V
T2 POWER
LCN101
LCN102
F1
TM1
PG1 AC230V
PCB-7
SECONDARY
K
Q425 2SC3907-Y
Q426 2SC3907-Y
Q423 2SA1837-Y
Q424 2SA1837-Y
R467 4.7 (F.R)
R468 4.7 (F.R)
R465 4.7 (F.R)
R466 4.7 (F.R)
R463 4.7 (F.R)
R464 4.7 (F.R)
R461 4.7 (F.R)
R462 4.7 (F.R)
Q427 2SC3907-0
Q428 2SC3907-0
Q431 2SC3907-0
Q432 2SC3907-0
Q433 2SA1516-0
Q434 2SA1516-0
Q429 2SA1516-0
Q430 2SA1516-0
Q19 2SC2240-BL
Q20 2SC2240-BL
R47 1.8K
R48 1.8K
R49 680
R50 680
R51 1.8K
R52 1.8K
R45 4.7K
R46 4.7K
R481 0.22 (3W)
R482 0.22 (3W)
R483 0.22 (3W)
R484 0.22 (3W)
R485 0.22 (3W)
R486 0.22 (3W)
R487 0.22 (3W)
R488 0.22 (3W)
R449 220 (F.R)
R450 220 (F.R)
C27 0.12
C28 0.12
C419 0.1 -0.01
C420 0.1
C421 0.1
C422 0.1
R457 4.7 (2W) MTL
R458 4.7 (2W) MTL
TM403
TM404
TM405
TM406
51.7
-51.7
CN102
CN284
CN705
-14.4
14.4
5.4
Page25
PH600
SCHEMATIC
DIAGRAM
B
1
Page20
SCHEMATIC
DIAGRAM(2)
J
1


Page20
SCHEMATIC DIAGRAM(2)
K
5
(W502)
TM401
L
R
H
Q21 2SK366-BL
Q22 2SK366-BL
D27 1S2473
D28 1S2473
D25 1S2473
D26 1S2473
DC BALANCE ADJUSTMENT
DC BALANCE ADJUSTMENT
IDLING CURRENT ADJUSTMENT
IDLING CURRENT ADJUSTMENT
Q401 2SC1775-F
Q402 2SC1775-F
Q403 2SC1775-F
Q404 2SC1775-F
Q405 2SB646A-C
Q406 2SB646A-C
Q407 2SB646A-C
Q408 2SB646A-C
Q409 2SC2240-BL
Q410 2SC2240-BL
Q411
Q412
Q413 2SB646A-C
Q414 2SB646A-C
Q415 2SD666A-C
Q416 2SD666A-C
Q417 2SC3423-Y
Q418 2SC3423-Y
Q421 2SB647A-C
Q422 2SB647A-C
Q423 2SA1837-Y
Q424 2SA1837-Y
Q425 2SC4793-Y
Q426 2SC4793-Y
Q427 2SD667A-C
Q428 2SD667A-C
Q435 2SC1775-F
Q436 2SC1775-F
Q437 2SC3423-Y
Q438 2SC3423-Y
Q481 2SA970-BL
Q482 2SA970-BL
Q15 2SC1740S-S
Q16 2SA933S-S
Q17 2SC1740S-S
Q91 2SA933S-S
VR401 500 IDRING CURRENT
VR402 500 IDRING CURRENT
VR481 100K
VR482 100K
D481 HZ15-1L
D482 HZ15-1L
C401 100/10
C402 100/10
C404 10P
C405 5P
C406 5P
C409 10/63
C410 10/63
C413 10/16
C414 10/16
C415 33P
C416 33P
C424 1/63
C481 47/25
C482 47/25
C483 47/25
C484 47/25
C92 47/25
R401 27K
R402 27K
R404 27K
R406 100 (F.R)
R407 100 (F.R)
R408 100 (F.R)
R409 100 (F.R)
R24 1M
R25 150K
R27 100K
R28 100K
R59 12K
R60 12K
R30 68K
R34 4.7K
R35 22K
R38 68K
R405 100 (F.R)
R406 100 (F.R)
R415 4.7K
R416 4.7K
R419 270
R420 270
R433 15K
R434 15K
R435 15K
R436 15K
R437 1.8K
R438 1.8K
R439 560
R440 560
R441 1.2K
R442 1.2K
R443 1.2K
R444 1.2K
R445 27K (1/4) MTL
R446 27K (1/4) MTL
R453 100 (F.R)
R454 100 (F.R)
R455 100 (F.R)
R456 100 (F.R)
R475 390 (F.R)
R476 390 (F.R)
R489 5.6K
R490 5.6K
R491 22K
R492 22K
R493 47K
R494 47K
R495 56K
R496 56K
R497 560 (1/4) MTL
R498 560 (1/4) MTL
R499 39 (1/4) MTL
R500 39 1/4W MTL
R417 47 (F.R)
R418 47 (F.R)
R424 10 (F.R)
R426 82 (F.R)
R427 68 (F.R)
R428 68 (F.R)
R430 82 (F.R)
R431 82 (F.R)
R432 82 (F.R)
R412 1K
R414 1K (F.R)
50.6
-0.03
-0.74
-11.8
-13.3
-13.9
-14.5
-39.0
-15.0
0.6
0
-50.7
-51.3
1.8
1.2
-1.8
-1.2
-14.4
14.4

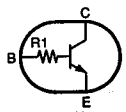

Q425 2SC4793-Y
R453 100 (F.R)
R467 4.7 (F.R)
51.7
R465 4.7 (F.R)
Q431 2SC3907-0
R485 0.22 (3W)
Q427 2SC3907-0
R481 0.22 (3W)
TM405
R47 1.8K
2SC2240-BL
Q19
C27 0.12
R49 680
C409 0/63
R449 220 (F.R)
R487 0.22 (3W)
Q433 2SA1516-0
R483 0.22 (3W)
Q429 2SA1516-0
C419 0.1
-0.01
R51 1.8K
C421 0.1
TM403
R457 4.7 (2W) MTL
R45 4.7K
R461 4.7 (F.R)
R455 -0.6
R463 4.7 (F.R)
Q423 2SA1837-Y
-51.7
Q426 2SC4793-Y
R454 100 (F.R)
R468 4.7 (F.R)
R466 4.7 (F.R)
Q432 2SC3907-0
Q428 2SC3907-0
R48 1.8K
2SC2240-BL
Q20
C410 10/63
R486 0.22 (3W)
R482 0.22 (3W)
TM406
C28 0.12
R50 680
R450 220 (F.R)
R488 0.22 (3W)
R484 0.22 (3W)
C420 0.1
Q434 2SA1516-0
Q430 2SA1516-0
R52 1.8K
R46 4.7K
C422 0.1
TM404
R456 100 (F.R)
R462 4.7 (F.R)
R458 4.7 (2W) MTL
Q424 2SA1837-Y
R464 4.7 (F.R)
W411
LCN403
LCN404
CC401
SW401A
SW401B
R81 470
R82 470
C81 100P
C82 100P
HEADP
PCB-3 HEAD
D17 D5SB20
CW11
C17 8200/63
C19 8200/63
F4 T4A/T4AL 250V
T2 POWER
C2 0.1
F5 T4A/T4AL 250V
C3 0.1
LCN101
LCN102
D19 D5SB20
CW12
C6 0.1
F6 T4A/T4AL 250V
D18 D5SB20
C18 8200/63
C20 8200/63
F7 T4A/T4AL 250V
C7 0.1
K
CW3
C4 0.1
D20 D5SB20
PCB-7 SECONDARY
CN102
51.7
-51.7
B
Page25 PH600 SCHEMATIC DIAGRAM
B 1
CN284
-14.4
14.4
F
Page20 SCHEMATIC DIAGRAM(2)
J 1
CN705
5.4
5.4
0.6
J
Page21 SCHEMATIC DIAGRAM(3)
E 1
(CW705)
Q14 2SC1740S-S
C26 0.1
C92 47/25
R94 100K
R33 100K
R54 22K
Q23 2SA970-BL
R98 33K
R36 22K
C24 0.1
R23 22K
R34 4.7K
R96 4.7K
R26 10K
R21 47K
Q91 2SA933S-S
R97 22K
R22 1.5K
C25 3300P


SW401A
SW401B
CC401
R81 470
R82 470
HP401
HEADPHONES
C81 100P
C82 100P
PCB-3 HEADPHONE
SPEAKER
SYSTEM 1
SPEAKER
SYSTEM 2
CN3
F3 T315mA/T315mAL 250V
D1 S5566B
D2 S5566B
D3 S5566B
D4 S5566B
C5 1000/25
D281 1S2473
RL1 RELAY
Q282 0 2SC3246(H)
5.0
R286 1K
R1 3.3M
C1 0.01
F2 T100mA/T100mAL 250V
D5 S5566B
D6 S5566B
D7 S5566B
D8 S5566B
C8 0.1
TM1
TM2
T1 SUB POWER
PG1 AC230V
F1 T3.15A/T3.15AL 250V
LCN101
LCN102
T2 POWER
F4 T4A/T4AL 250V
F5 T4A/T4AL 250V
F6 T4A/T4AL 250V
F7 T4A/T4AL 250V
C2 0.1
C3 0.1
C6 0.1
C7 0.1
C4 0.1
(CW3)
PCB-7 SECONDARY
PCB-5 POWER SUPPLY
CN281
+13V
G
P-CONT
H101
R281 47
C281 47/25
H102
+5V
CONTROL
G
(JL101)
R284 47K
Q281 DTA143ES
5.0
R285 47
R282 3.9K
R283 270
PH1 PC817
J281 REMOTE IN
J282 REMOTE OUT
PCB-8 REMOTE IN/OUT
Page21 SCHEMATIC DIAGRAM(3)
A 2
L
(CW281)
CN102
B
Page25 PH600 SCHEMATIC DIAGRAM
B 1
CN284
F
Page20 SCHEMATIC DIAGRAM(2)
J 1
CN705
J
Page21 SCHEMATIC DIAGRAM(3)
E 1
(CW705)

J	K	L	M	N



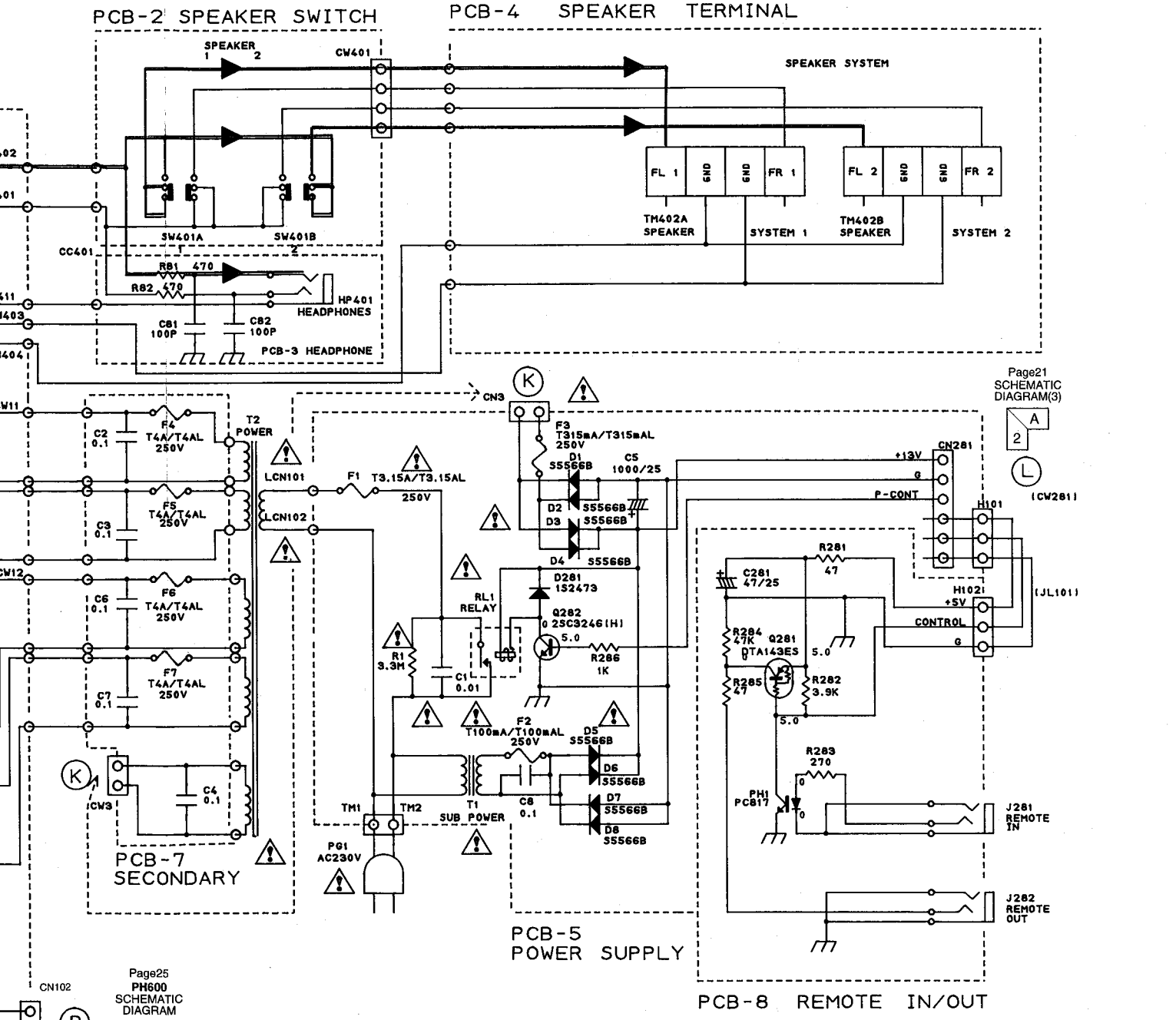
Type	R1	R2
DTA114ES	10K	10K
DTA124ES	22K	22K
DTA143ES	4.7K	4.7K
DTA144ES	47K	47K



Type	R1
DTC114TS	10K

NOTE

1. ALL RESISTANCES VALUES ARE IN ohm .
   Kohm=1000ohm.Mohm=1000Kohm.
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN uF UNLESS OTHERWISE NOTED.P=uuF.
4. ....V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. SAFTEY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS.THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGNAL PARTS.



SCHEMATIC DIAGRAM (2)

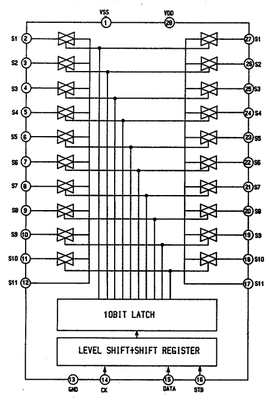
PCB-12 CONTROL

PCB-10 MONO/STEREO SWITCH

PCB-9 TONE CONTROL

PCB-11 VOLUME

IC801 : TC9273N



AUX2

AUX

VIDEO

TUNER

CD

TAPE2 IN

TAPE2 OUT

TAPE1 IN

TAPE1 OUT

MONO

BALANCE

VOLUME

TONE DEFEAT

PRE-OUT
MAIN-IN

SW502 INTEGRATED / SEPARATE

Page25 PH600 SCHEMATIC DIAGRAM (C) 1

Page21 SCHEMATIC DIAGRAM(3) (C) E 1

Page21 SCHEMATIC DIAGRAM(3) (D) F 1

Page21 SCHEMATIC DIAGRAM(3) (E)

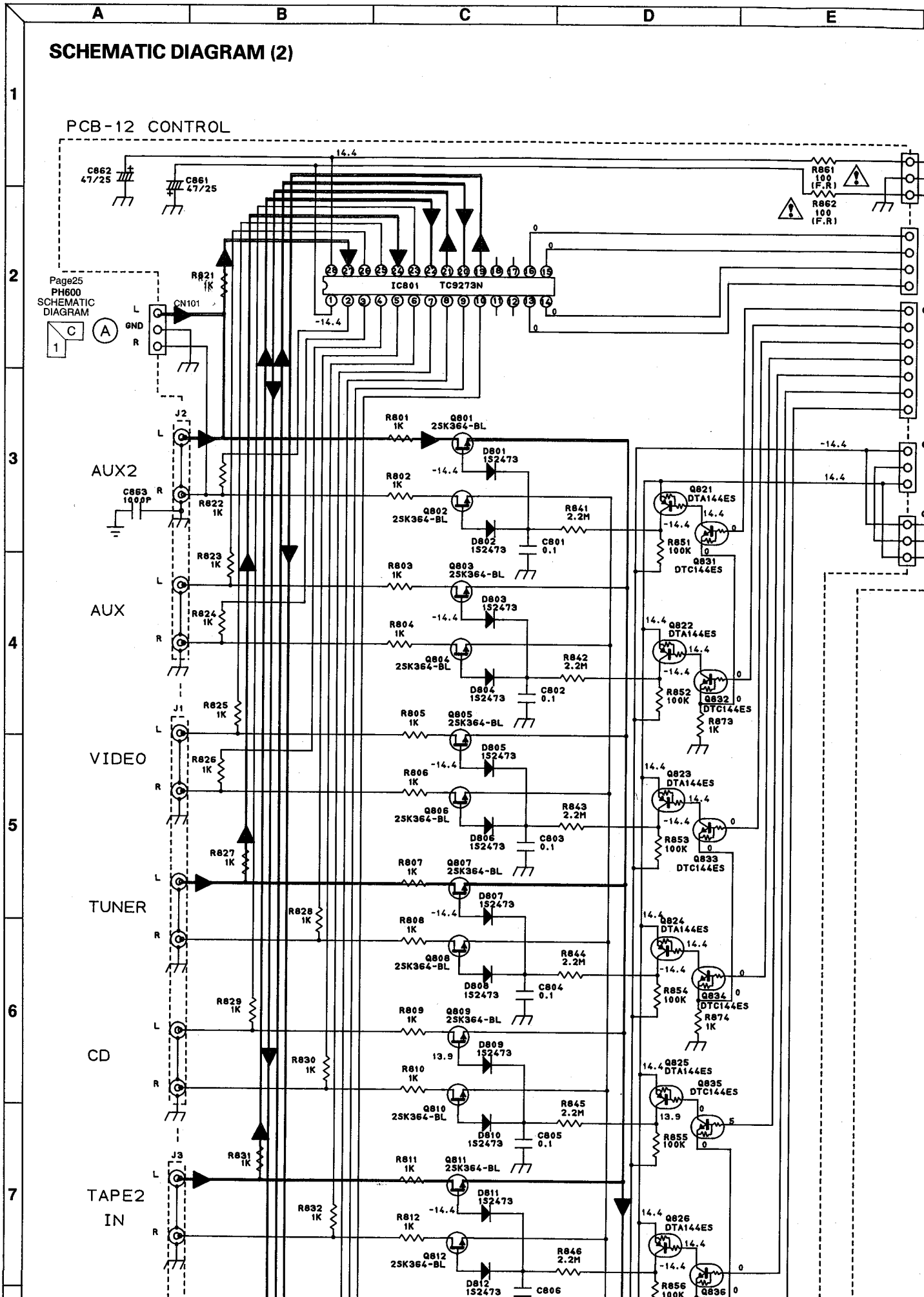
Page19 SCHEMATIC DIAGRAM(1) (F) J 7

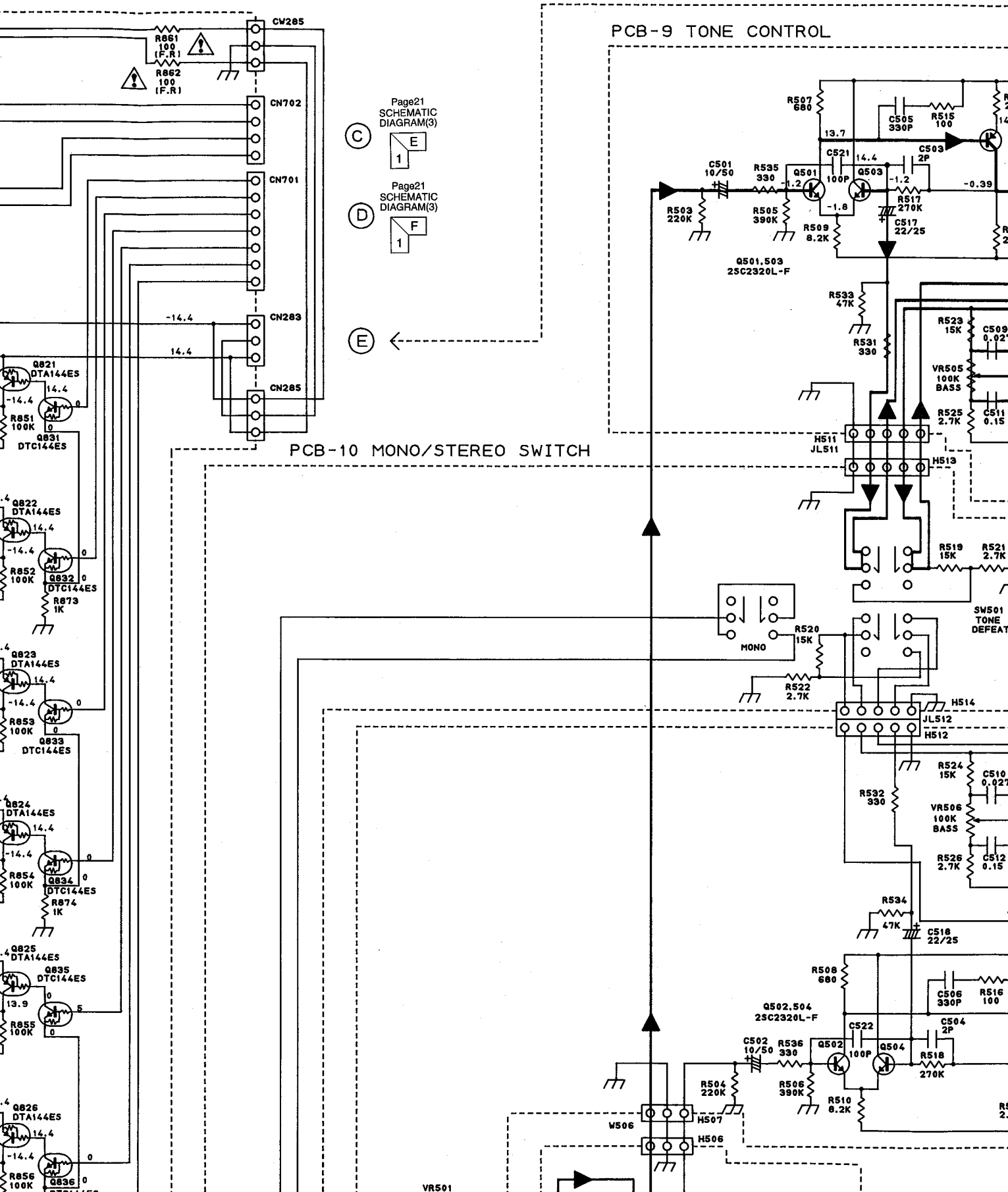
Page19 SCHEMATIC DIAGRAM(1) (G) H 2

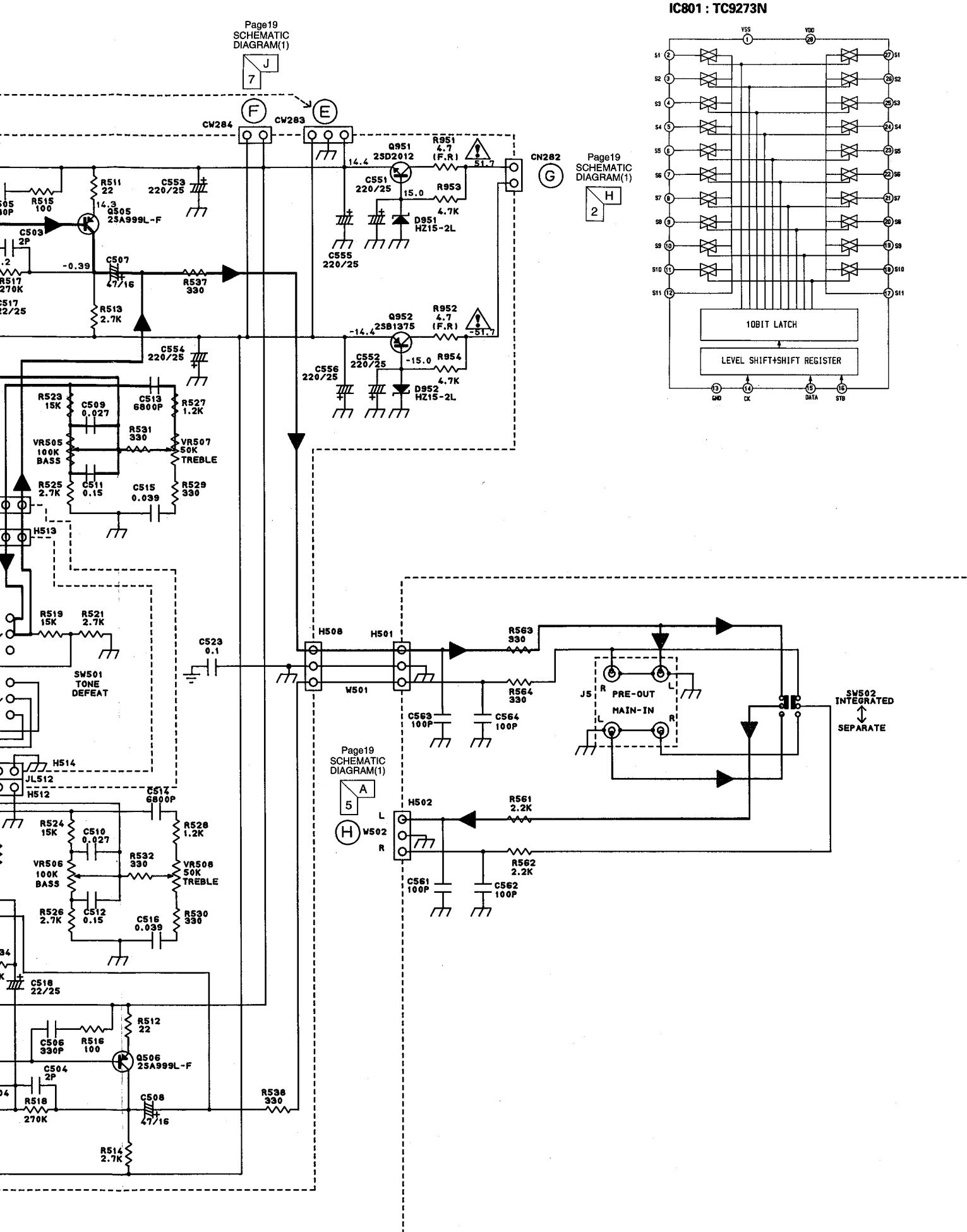
Page19 SCHEMATIC DIAGRAM(1) (H) A 5

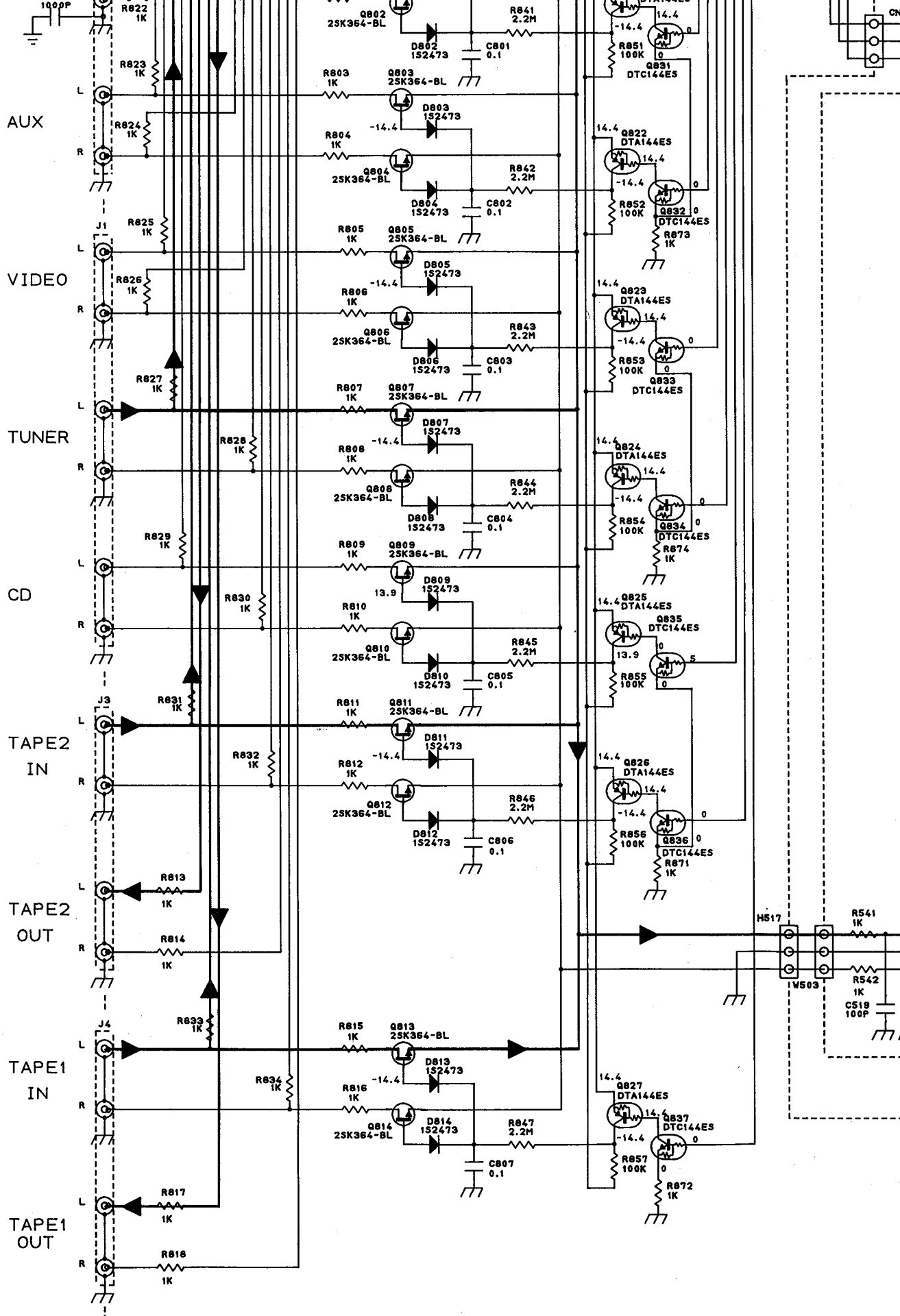
Page21 SCHEMATIC DIAGRAM(3) (I) E 1 (CW704)

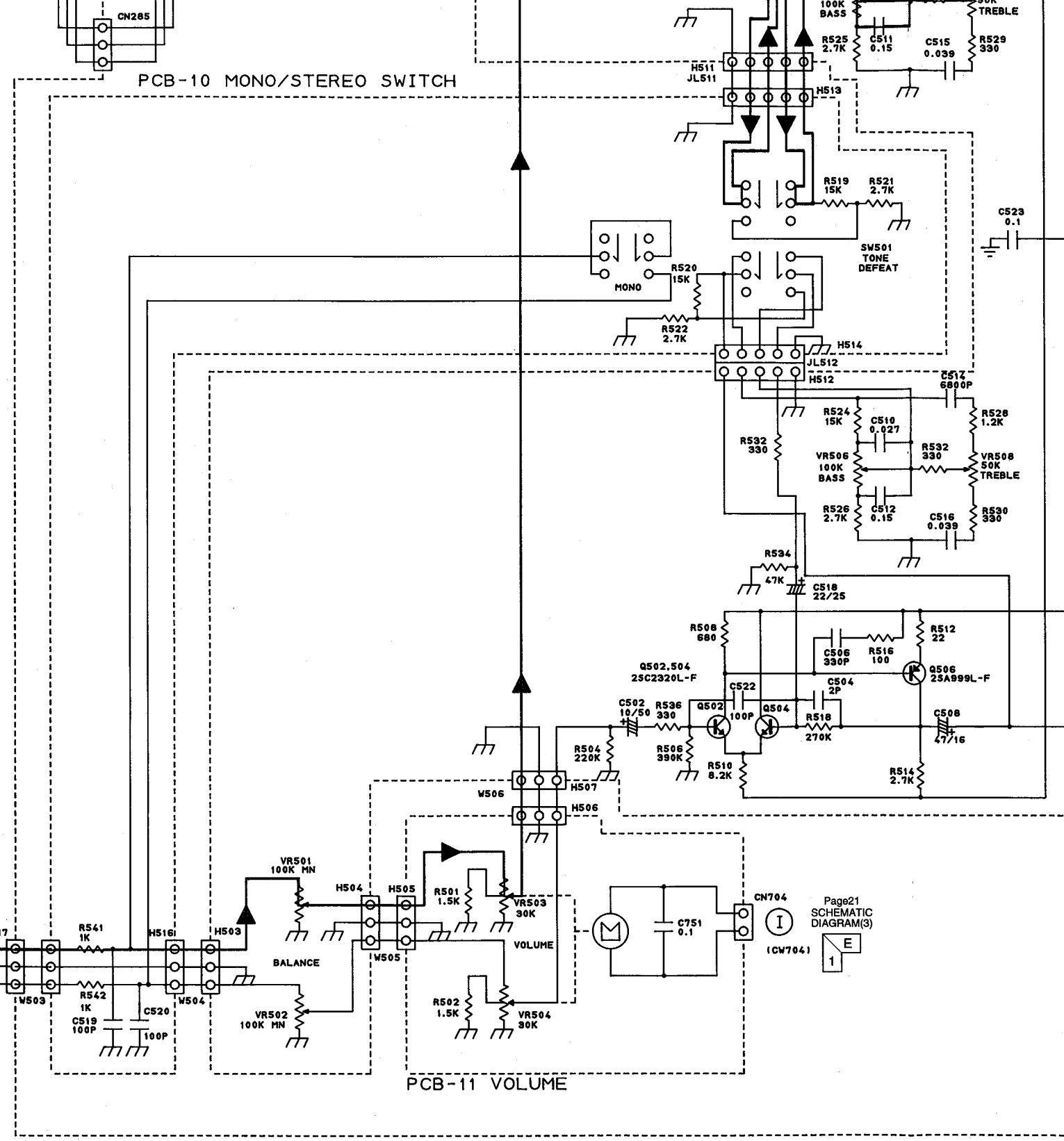
SCHEMATIC DIAGRAM (2)

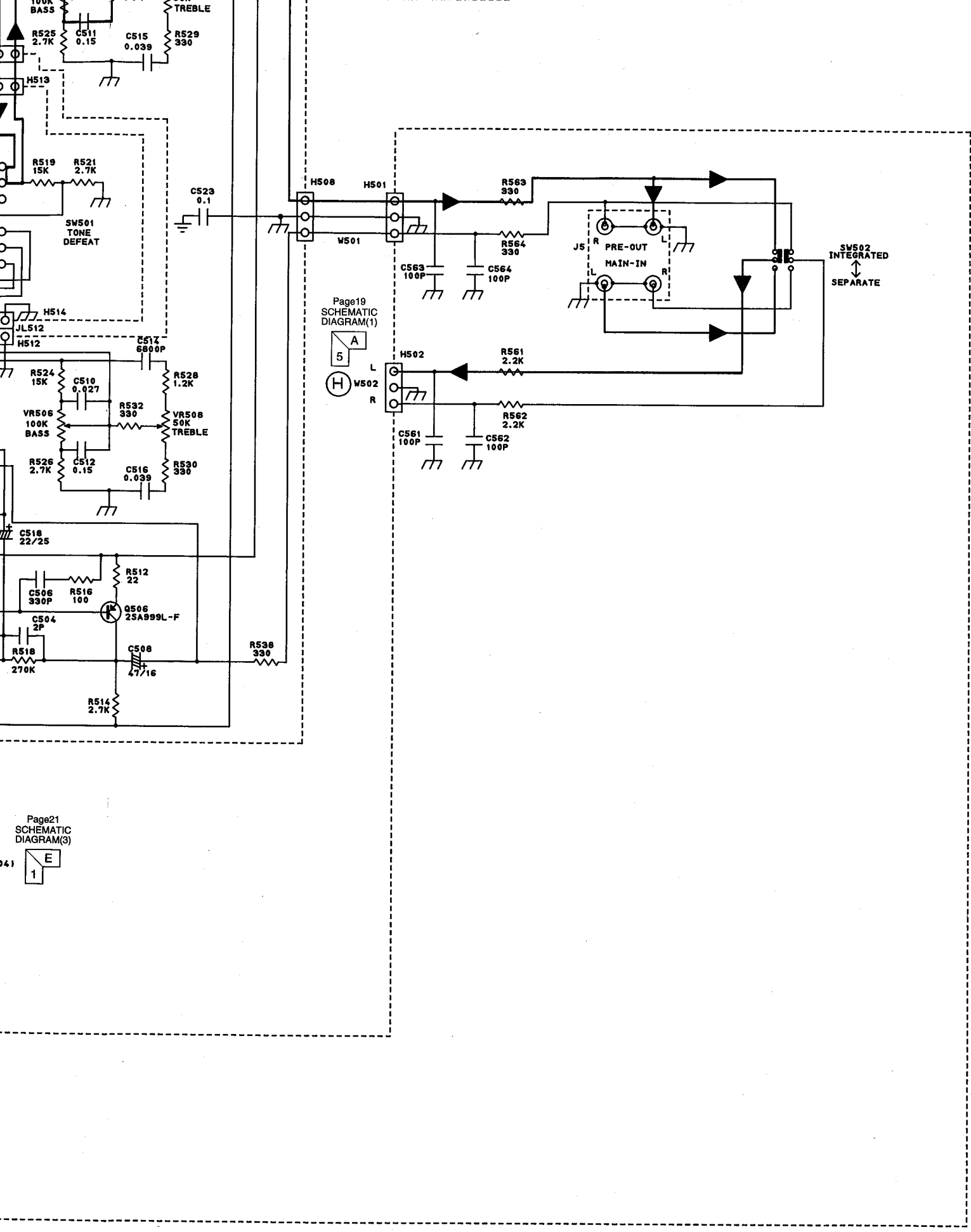



PCB-9 TONE CONTROL
PCB-10 MONO/STEREO SWITCH
CW285
CN702
CN701
CN283
CN285
R861 100 (F.R)
R862 100 (F.R)
Page21 SCHEMATIC DIAGRAM(3) E 1
Page21 SCHEMATIC DIAGRAM(3) F 1
C
D
E
Q821 DTA144ES
Q831 DTC144ES
Q822 DTA144ES
Q832 DTC144ES
Q823 DTA144ES
Q833 DTC144ES
Q824 DTA144ES
Q834 DTC144ES
Q825 DTA144ES
Q835 DTC144ES
Q826 DTA144ES
Q836 DTC144ES
R851 100K
R852 100K
R853 100K
R854 100K
R855 100K
R856 100K
R873 1K
R874 1K
-14.4
14.4
13.9
R507 680
C505 330P
R515 100
C503 2P
C521 100P
C501 10/50
R535 330
Q501
Q503
R503 220K
R505 390K
R509 8.2K
R517 270K
C517 22/25
Q501,503 2SC2320L-F
R533 47K
R531 330
R523 15K
C509 0.02
VR505 100K BASS
R525 2.7K
C511 0.15
H511 JL511
H513
R519 15K
R521 2.7K
SW501 TONE DEFEAT
MONO
R520 15K
R522 2.7K
H514
JL512
H512
R524 15K
C510 0.027
R532 330
VR506 100K BASS
R526 2.7K
C512 0.15
R534 47K
C518 22/25
R508 680
C506 330P
R516 100
Q502,504 2SC2320L-F
C522 100P
C504 2P
C502 10/50
R536 330
Q502
Q504
R518 270K
R504 220K
R506 390K
R510 8.2K
W506
H507
H506
VR501

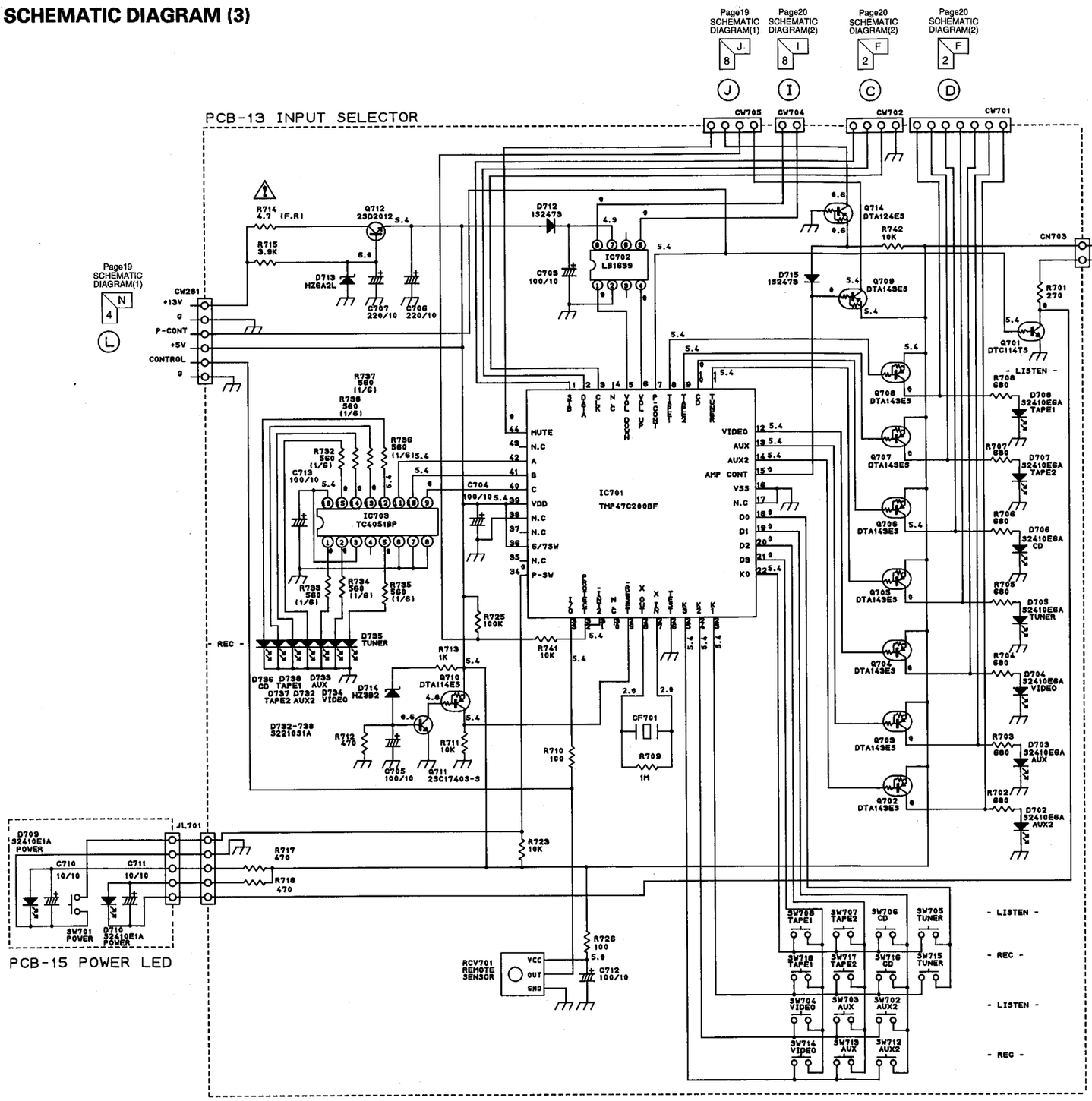

IC801 : TC9273N
VSS
VDD
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
10BIT LATCH
LEVEL SHIFT+SHIFT REGISTER
GND
CK
DATA
STB
Page19 SCHEMATIC DIAGRAM(1) J 7
Page19 SCHEMATIC DIAGRAM(1) H 2
Page19 SCHEMATIC DIAGRAM(1) A 5
CW284
CW283
CN282
Q951 2SD2012
Q952 2SB1375
Q505 2SA999L-F
Q506 2SA999L-F
D951 HZ15-2L
D952 HZ15-2L
R951 4.7 (F.R)
R952 4.7 (F.R)
R953 4.7K
R954 4.7K
R511 22
R512 22
R513 2.7K
R514 2.7K
R515 100
R516 100
R517 270K
R518 270K
R523 15K
R524 15K
R525 2.7K
R526 2.7K
R527 1.2K
R528 1.2K
R529 330
R530 330
R531 330
R532 330
R537 330
R538 330
R519 15K
R521 2.7K
R563 330
R564 330
R561 2.2K
R562 2.2K
C503 2P
C504 2P
C506 330P
C507 47/16
C508 47/16
C509 0.027
C510 0.027
C511 0.15
C512 0.15
C513 6800P
C514 6800P
C515 0.039
C516 0.039
C517 22/25
C518 22/25
C523 0.1
C551 220/25
C552 220/25
C553 220/25
C554 220/25
C555 220/25
C556 220/25
C561 100P
C562 100P
C563 100P
C564 100P
VR505 100K BASS
VR506 100K BASS
VR507 50K TREBLE
VR508 50K TREBLE
SW501 TONE DEFEAT
SW502 INTEGRATED SEPARATE
J5 PRE-OUT MAIN-IN
H501
H502
H508
H513
H514
JL512
H512
W501
W502
14.4
-14.4
51.7
-51.7
15.0
-15.0
-0.39


AUX
VIDEO
TUNER
CD
TAPE2 IN
TAPE2 OUT
TAPE1 IN
TAPE1 OUT
J1
J3
J4
L
R
1000P
R822 1K
R823 1K
R824 1K
R825 1K
R826 1K
R827 1K
R828 1K
R829 1K
R830 1K
R831 1K
R832 1K
R833 1K
R834 1K
R813 1K
R814 1K
R817 1K
R818 1K
Q802 2SK364-BL
Q803 2SK364-BL
Q804 2SK364-BL
Q805 2SK364-BL
Q806 2SK364-BL
Q807 2SK364-BL
Q808 2SK364-BL
Q809 2SK364-BL
Q810 2SK364-BL
Q811 2SK364-BL
Q812 2SK364-BL
Q813 2SK364-BL
Q814 2SK364-BL
D802 1S2473
D803 1S2473
D804 1S2473
D805 1S2473
D806 1S2473
D807 1S2473
D808 1S2473
D809 1S2473
D810 1S2473
D811 1S2473
D812 1S2473
D813 1S2473
D814 1S2473
R841 2.2M
R842 2.2M
R843 2.2M
R844 2.2M
R845 2.2M
R846 2.2M
R847 2.2M
C801 0.1
C802 0.1
C803 0.1
C804 0.1
C805 0.1
C806 0.1
C807 0.1
R803 1K
R804 1K
R805 1K
R806 1K
R807 1K
R808 1K
R809 1K
R810 1K
R811 1K
R812 1K
R815 1K
R816 1K
-14.4
13.9
14.4
Q822 DTA144ES
Q823 DTA144ES
Q824 DTA144ES
Q825 DTA144ES
Q826 DTA144ES
Q827 DTA144ES
Q831 DTC144ES
Q832 DTC144ES
Q833 DTC144ES
Q834 DTC144ES
Q835 DTC144ES
Q836 DTC144ES
Q837 DTC144ES
R851 100K
R852 100K
R853 100K
R854 100K
R855 100K
R856 100K
R857 100K
R871 1K
R872 1K
R873 1K
R874 1K
H517
W503
R541 1K
R542 1K
CS19 100P

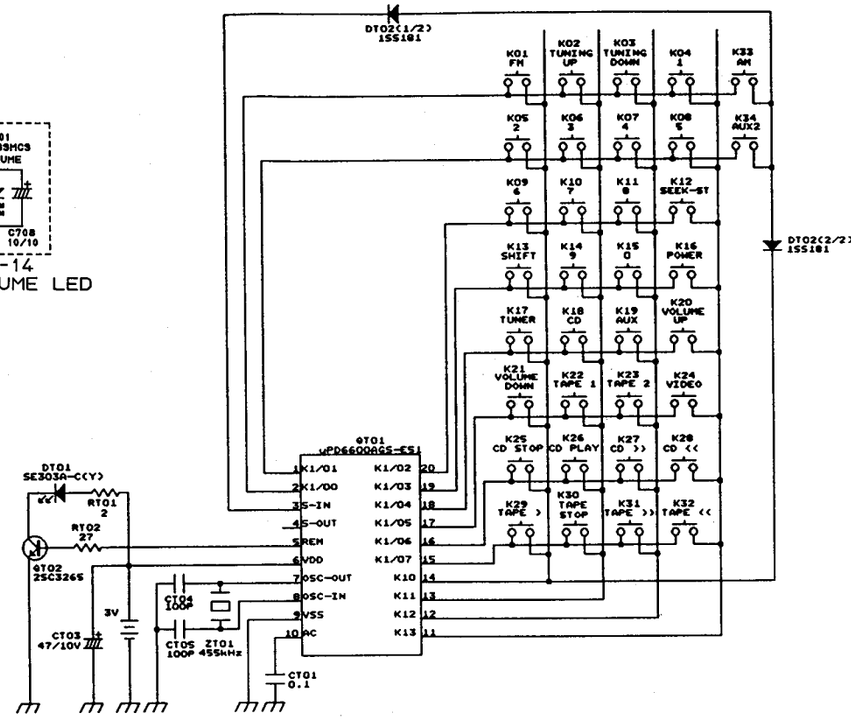

CN285
PCB-10 MONO/STEREO SWITCH
100K BASS
TREBLE
R525 2.7K
C511 0.15
C515 0.039
R529 330
H511 JL511
H513
R519 15K
R521 2.7K
C523 0.1
SW501 TONE DEFEAT
MONO
R520 15K
R522 2.7K
H514
JL512
H512
C517 6800P
R524 15K
C510 0.027
R528 1.2K
R532 330
VR506 100K BASS
R532 330
VR508 50K TREBLE
R526 2.7K
C512 0.15
C516 0.039
R530 330
R534 47K
C518 22/25
R508 680
C506 330P
R516 100
R512 22
Q502,504 2SC2320L-F
Q506 2SA999L-F
C522 100P
C504 2P
C502 10/50
R536 330
Q502
Q504
R518 270K
C508 47/16
R504 220K
R506 390K
R510 8.2K
R514 2.7K
W506
H507
H506
VR501 100K MN
H504
H505
R501 1.5K
VR503 30K
VOLUME
C751 0.1
CN704
(CW704)
Page21 SCHEMATIC DIAGRAM(3)
E
1
R541 1K
H516
H503
BALANCE
W505
W503
W504
R542 1K
C519 100P
C520 100P
VR502 100K MN
R502 1.5K
VR504 30K
PCB-11 VOLUME


100K BASS
TREBLE
R525 2.7K
C511 0.15
C515 0.039
R529 330
H513
R519 15K
R521 2.7K
SW501 TONE DEFEAT
H514
JL512
H512
C514 6800P
R524 15K
C510 0.027
R528 1.2K
R532 330
VR506 100K BASS
VR508 50K TREBLE
R526 2.7K
C512 0.15
C516 0.039
R530 330
C518 22/25
R512 22
C506 330P
R516 100
Q506 2SA999L-F
C504 2P
R518 270K
C508 47/16
R538 330
R514 2.7K
C523 0.1
H508
H501
W501
R563 330
R564 330
C563 100P
C564 100P
J5
PRE-OUT
MAIN-IN
SW502 INTEGRATED
SEPARATE
Page19 SCHEMATIC DIAGRAM(1)
A
5
H
W502
H502
L
R
R561 2.2K
R562 2.2K
C561 100P
C562 100P
Page21 SCHEMATIC DIAGRAM(3)
E
1

SCHEMATIC DIAGRAM (3)

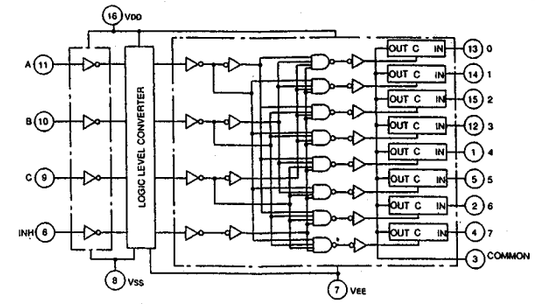


INFRARED REMOTE CONTROL SCHEMATIC DIAGRAM

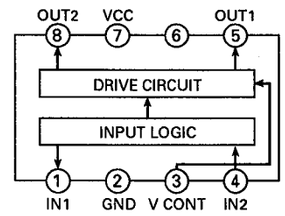


NOTE : Infrared Remote Control parts are not available.
Schematic diagram is supplied for reference only.

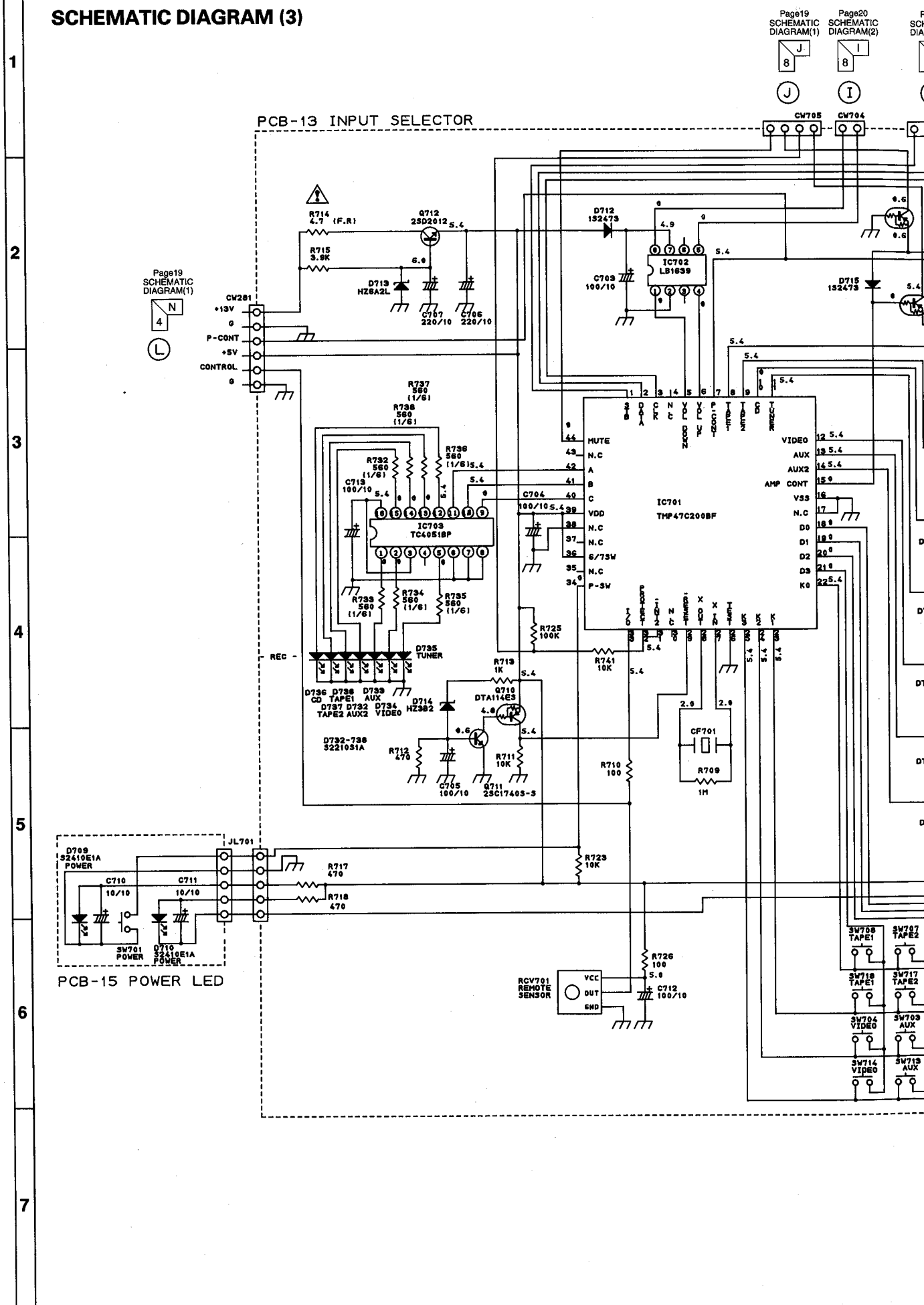
IC703 : TC4051BP



IC702 : LB1639 Volume Motor Driver



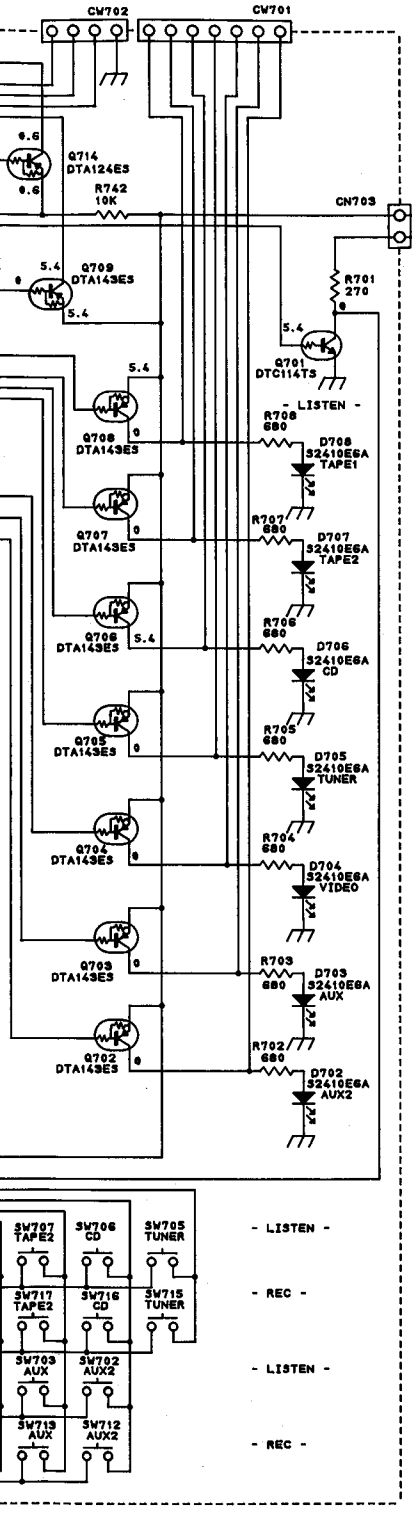
SCHEMATIC DIAGRAM (3)

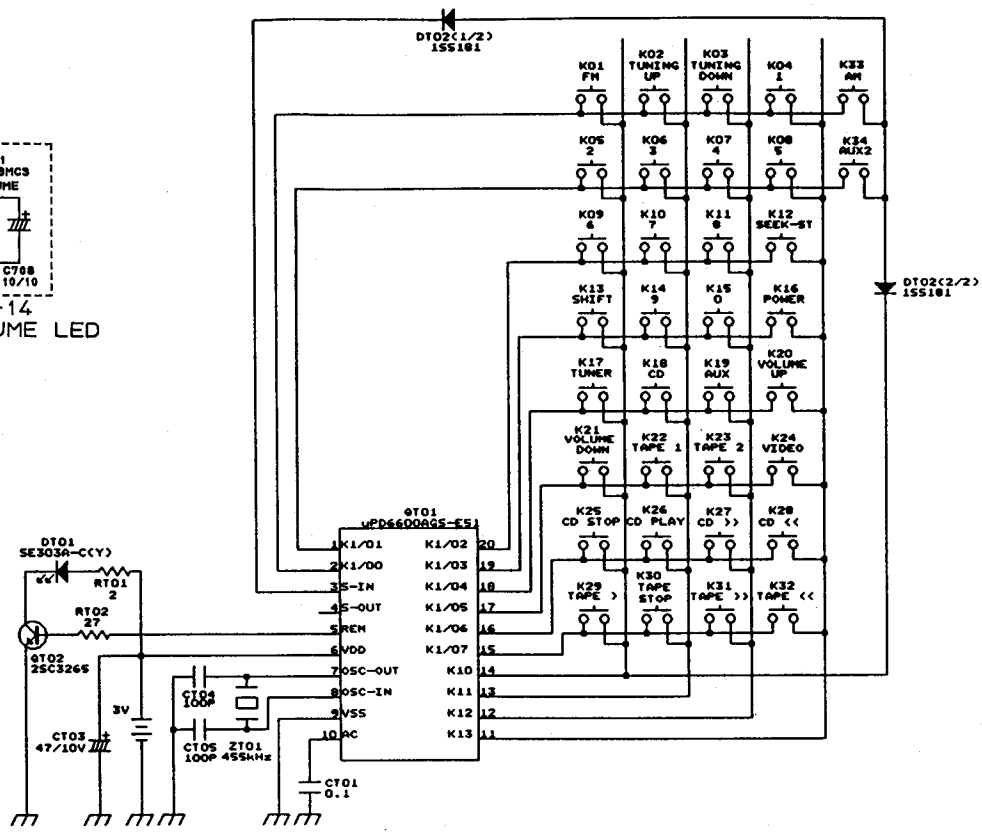


F G H I J

Page20 SCHEMATIC DIAGRAM(2) F 2 C
Page20 SCHEMATIC DIAGRAM(2) F 2 D

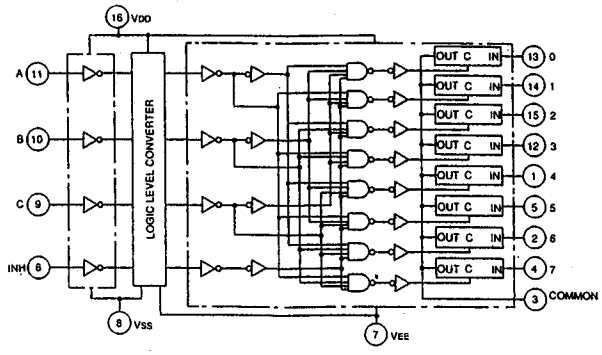
INFRARED REMOTE CONTROL SCHEMATIC DIAGRAM



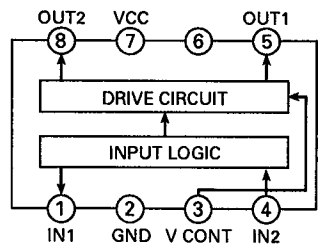


NOTE : Infrared Remote Control parts are not available.
Schematic diagram is supplied for reference only.

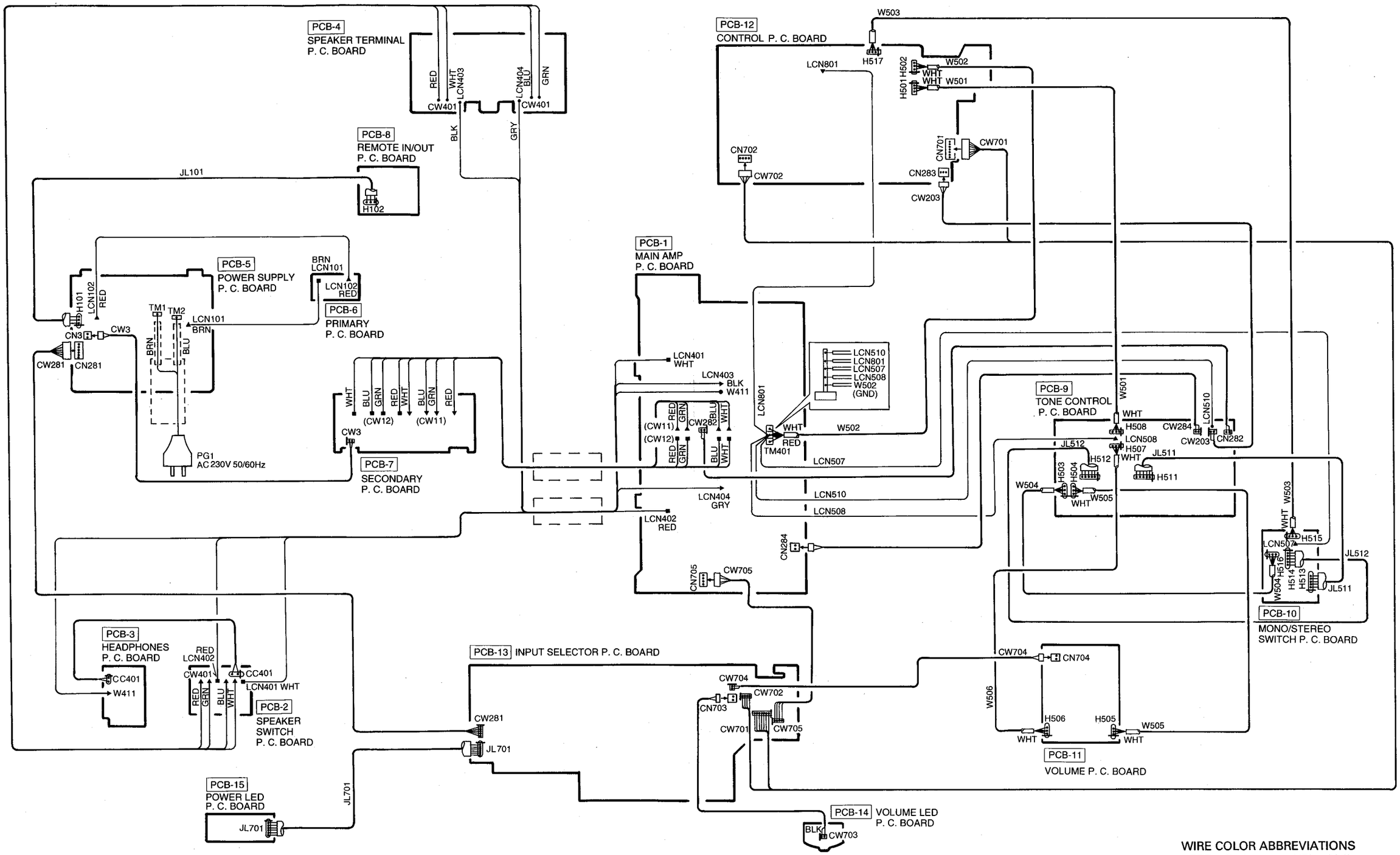
IC703 : TC4051BP



IC702 : LB1639 Volume Motor Driver



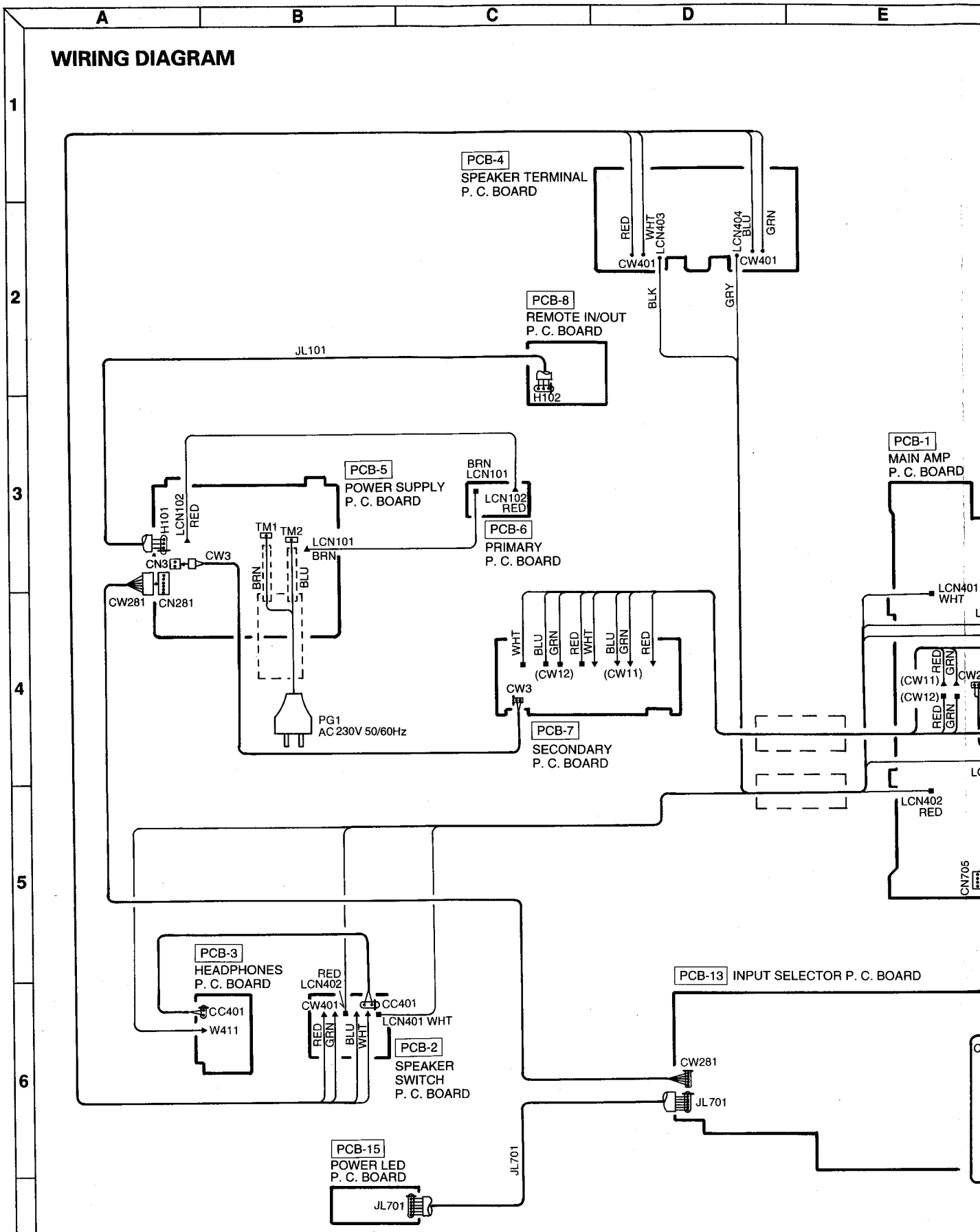
WIRING DIAGRAM

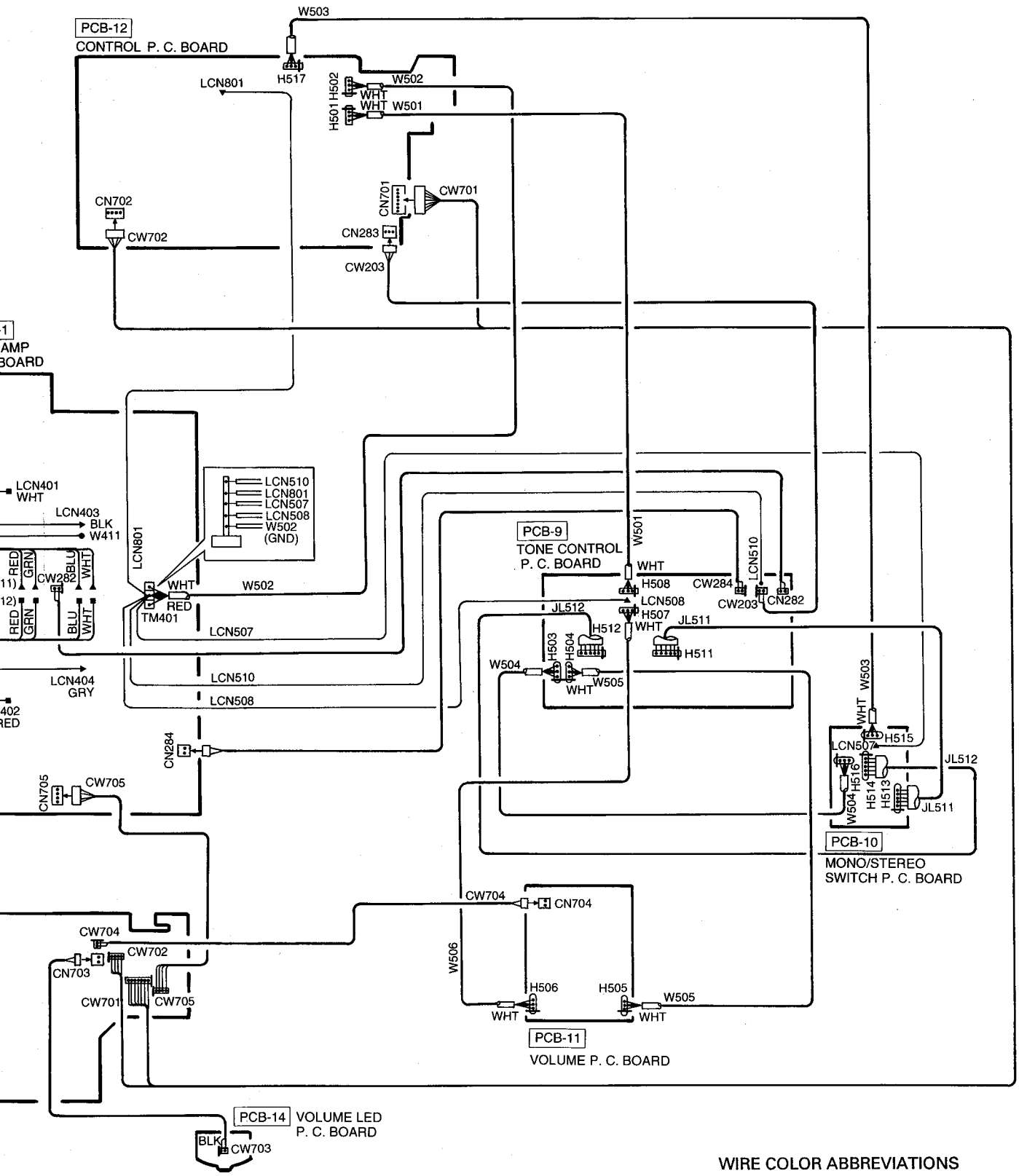


WIRE COLOR ABBREVIATIONS

RED : Red	YEL : Yellow
ORG : Orange	PUP : Purple
BLU : Blue	PIK : Pink
WHT : White	BRN : Brown
BLK : Black	

WIRING DIAGRAM





WIRE COLOR ABBREVIATIONS

RED : Red	YEL : Yellow
ORG : Orange	PUP : Purple
BLU : Blue	PIK : Pink
WHT : White	BRN : Brown
BLK : Black	

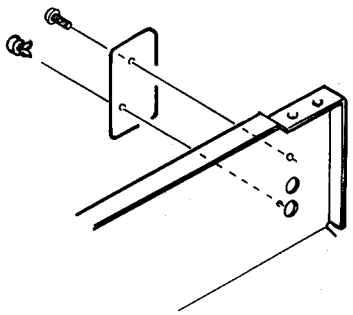
PH600 PHONO P.C. BOARD OPTION:

When this option is installed, MM or MC turntables can be connected to the RCA jacks on the Phono PCB. To use the Phono input, the function selector switch on the front panel must be set to the AUX2 position. Please note that which the Phono PCB option installed, signal wires shall not be connected to the AUX2 RCA connectors. Signal applied to the AUX2 input with the Phono option installed, will be attenuated and may be distorted.
Installation of Optional Phono PCB (PH600):

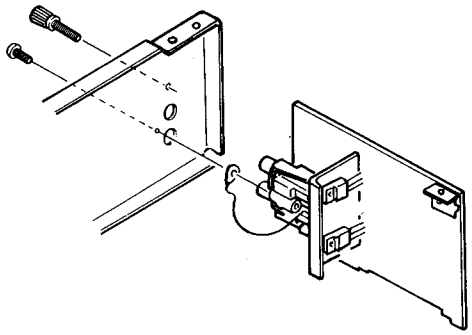
(Please re-print the information from information sheet you already prepared.)

HOW TO INSTALL

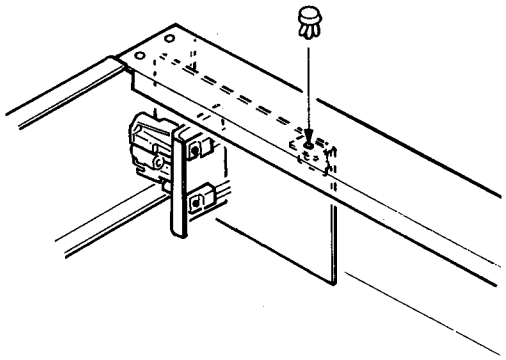
① Remove 8 screws and then remove the Top Cover of HK680.
② Remove a screw and a rivet and then remove the plate.



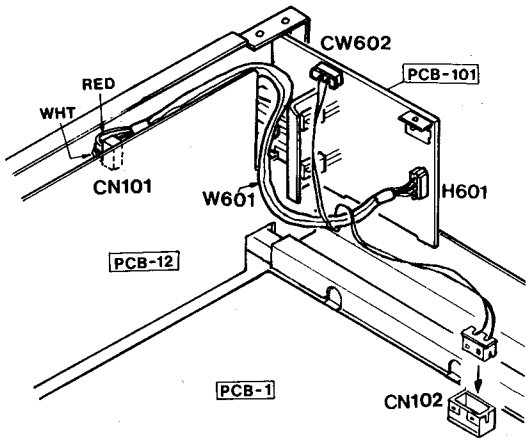
④ Secure the screw removed from the plate and the ground terminal screw (included).



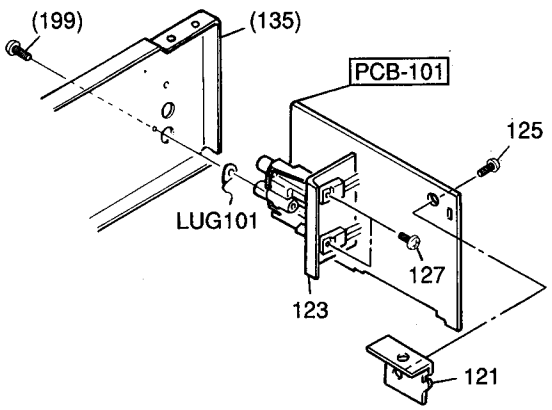
③ For HK680, secure PH600 with a rivet removed from the plate.



⑤ Connect the 2 cables precisely as shown in the illustration.



GENERAL UNIT



GENERAL UNIT PARTS LIST

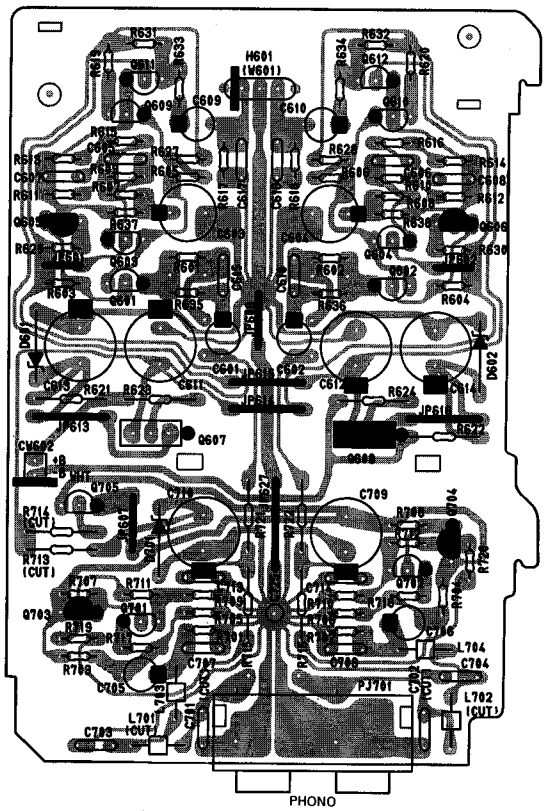
Ref. No.	Part No.	Description
121	2219-8350	METAL FITTG
123	2222-7179	HEAT SINK,Q607,608
125	2347-R0130062	SCREW,BND T+ (3x6 mm)
127	2347-R0130082	SCREW,BND T+ (3x8 mm) (x2)

P. C. BOARDS

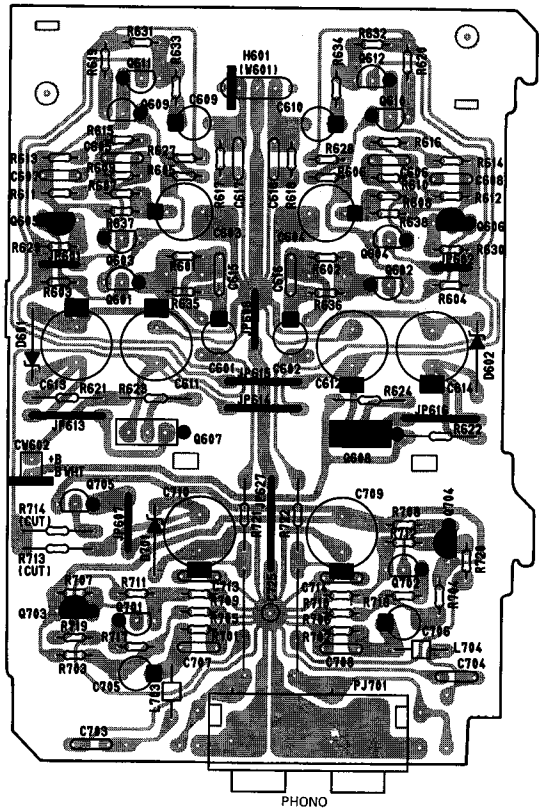
The PH600 is set at the factory as a high gain MC EQ amplifier. It can easily be converted to a MM EQ amplifier by making these changes:

1. Remove L701 and L702 (bare wires with ferrite beads),
2. Remove C701 and C702 (0.022μF capacitors, marked 223J),
3. Remove R715 and R716 (1kΩ resistors), and
4. Add 2 jumper wires (JP) along the dotted lines on the circuit board (near the location of R715 and R716).

MC VERSION (Factory setting)

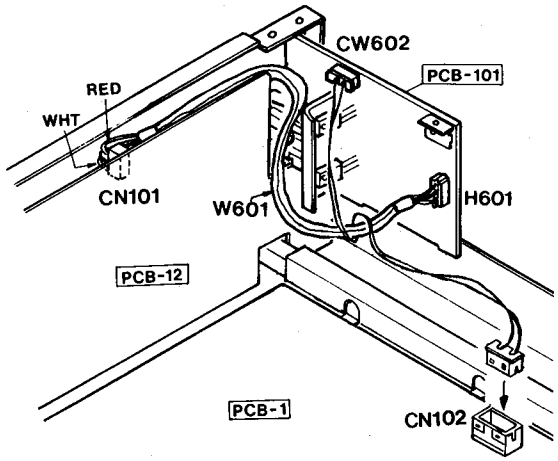


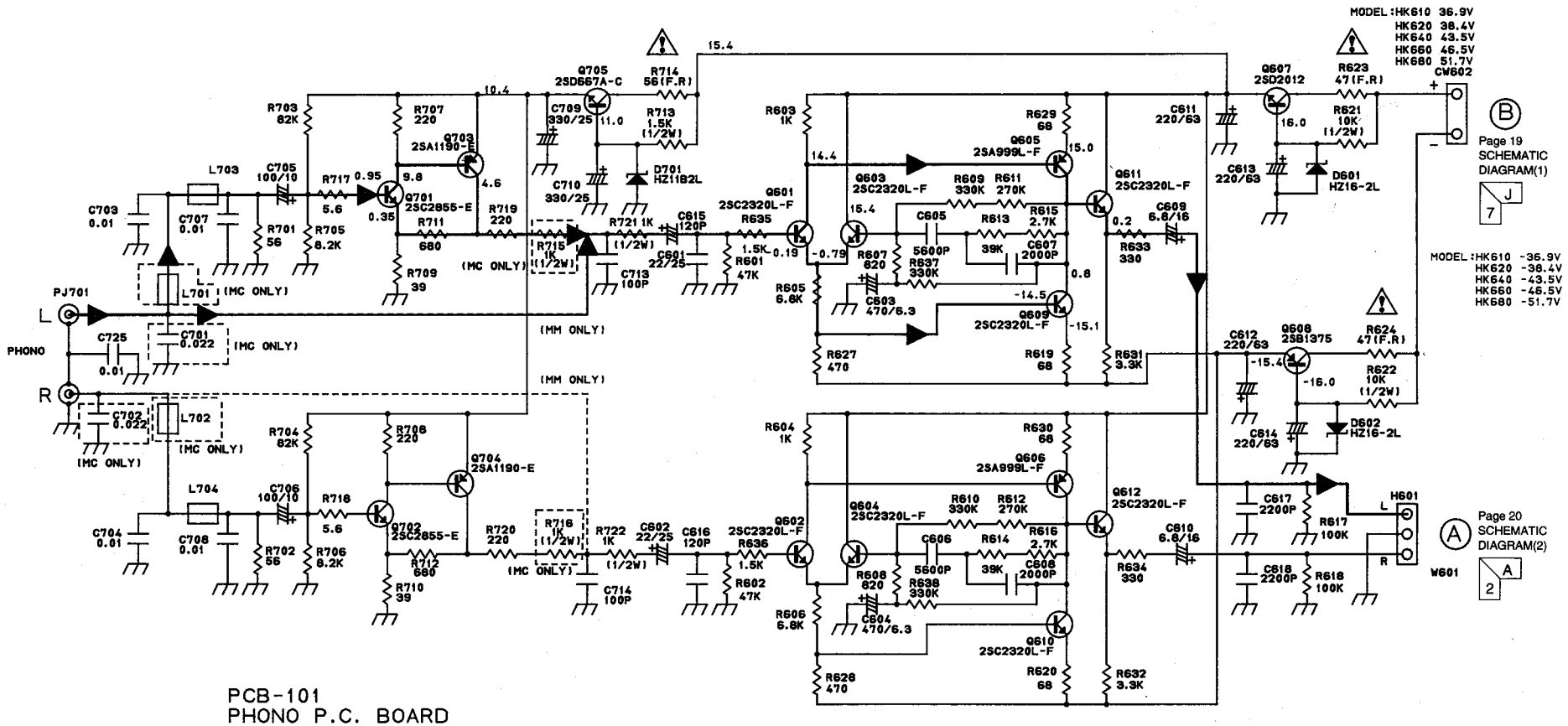
MM VERSION



L701, L702 ⟶ Delete
C701, C702 ⟶ Delete
R715, R716 ⟶ Delete
Add 2 jumper wires (JP) along dotted lines

WIRING DIAGRAM





PCB-101
PHONO P.C. BOARD

ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description
		PCB-101 PHONO P.C. BOARD	
		CAPACITORS	
400	C601	5345-S29DM226	CAP,MINI ELE 22μ/25V
400	C602	5345-S29DM226	CAP,MINI ELE 22μ/25V
401	C603	5345-S29AD477	CAP,MINI ELE 470μ/6.3V
401	C604	5345-S29AD477	CAP,MINI ELE 470μ/6.3V
402	C605	5359-5625851	CAP,PPP 5600P
402	C606	5359-5625851	CAP,PPP 5600P
403	C607	5359-2025851	CAP,PPP 2000P
403	C608	5359-2025851	CAP,PPP 2000P
404	C609	5345-685C0951	CAP,MINI ELE 6.8μ/16V
404	C610	5345-685C0951	CAP,MINI ELE 6.8μ/16V
405	C611	5345-S25GM227	CAP,MINI ELE 220μ/63V
405	C612	5345-S25GM227	CAP,MINI ELE 220μ/63V
405	C613	5345-S25GM227	CAP,MINI ELE 220μ/63V
405	C614	5345-S25GM227	CAP,MINI ELE 220μ/63V
406	C615	5359-1215851	CAP,PPP 120P
406	C616	5359-1215851	CAP,PPP 120P
430	C617	5359-2225851	CAP,PPP 2200P
430	C618	5359-2225851	CAP,PPP 2200P
441	C701	5359-S010J223	CAP,PPP .022μ
441	C702	5359-S010J223	CAP,PPP .022μ
442	C703	5359-S010J103	CAP,PPP .01μ
442	C704	5359-S010J103	CAP,PPP .01μ
443	C705	5345-S29BM107	CAP,MINI ELE 100μ/10V
443	C706	5345-S29BM107	CAP,MINI ELE 100μ/10V
442	C707	5359-S010J103	CAP,PPP .01μ
442	C708	5359-S010J103	CAP,PPP .01μ
444	C709	5345-S25DM337	CAP,MINI ELE 330μ/25V
444	C710	5345-S25DM337	CAP,MINI ELE 330μ/25V
438	C713	5359-S010K101	CAP,PPP 100P
438	C714	5359-S010K101	CAP,PPP 100P
439	C725	5359-S010J103	CAP,PPP .01μ
		RESISTORS	
413	R601	5130-R010J473	RES,CBN 1/6P 47K
413	R602	5130-R010J473	RES,CBN 1/6P 47K
414	R603	5130-R010J102	RES,CBN 1/6P 1K
414	R604	5130-R010J102	RES,CBN 1/6P 1K
415	R605	5130-R010J682	RES,CBN 1/6P 6.8K
415	R606	5130-R010J682	RES,CBN 1/6P 6.8K
416	R607	5178-821381	RES,MTL 1/6P 820
416	R608	5178-821381	RES,MTL 1/6P 820
417	R609	5178-334381	RES,MTL 1/6P 330K
417	R610	5178-334381	RES,MTL 1/6P 330K
418	R611	5178-274381	RES,MTL 1/6P 270K
418	R612	5178-274381	RES,MTL 1/6P 270K
419	R613	5178-393381	RES,MTL 1/6P 39K
419	R614	5178-393381	RES,MTL 1/6P 39K
420	R615	5178-272381	RES,MTL 1/6P 2.7K
420	R616	5178-272381	RES,MTL 1/6P 2.7K
421	R617	5130-R010J104	RES,CBN 1/6P 100K
421	R618	5130-R010J104	RES,CBN 1/6P 100K
428	R619	5130-R010J680	RES,CBN 1/6P 68
428	R620	5130-R010J680	RES,CBN 1/6P 68
422	R621	5130-R030J103	RES,CBN 1/2P 10K
422	R622	5130-R030J103	RES,CBN 1/2P 10K
423	⚠ R623	5102-4705116	RES,FUSE 47
423	⚠ R624	5102-4705116	RES,FUSE 47
429	R627	5130-R010J471	RES,CBN 1/6P 470
429	R628	5130-R010J471	RES,CBN 1/6P 470
428	R629	5130-R010J680	RES,CBN 1/6P 68
428	R630	5130-R010J680	RES,CBN 1/6P 68
427	R631	5130-R010J332	RES,CBN 1/6P 3.3K
427	R632	5130-R010J332	RES,CBN 1/6P 3.3K
424	R633	5130-R010J331	RES,CBN 1/6P 330
424	R634	5130-R010J331	RES,CBN 1/6P 330
433	R635	5130-R010J152	RES,CBN 1/6P 1.5K
433	R636	5130-R010J152	RES,CBN 1/6P 1.5K
417	R637	5178-334381	RES,MTL 1/6P 330K
417	R638	5178-334381	RES,MTL 1/6P 330K
450	R701	5130-R010J560	RES,CBN 1/6P 56
450	R702	5130-R010J560	RES,CBN 1/6P 56
456	R703	5130-R010J823	RES,CBN 1/6P 82K
456	R704	5130-R010J823	RES,CBN 1/6P 82K
451	R705	5130-R010J822	RES,CBN 1/6P 8.2K
451	R706	5130-R010J822	RES,CBN 1/6P 8.2K
458	R707	5130-R010J221	RES,CBN 1/6P 220
458	R708	5130-R010J221	RES,CBN 1/6P 220
452	R709	5178-390381	RES,MTL 1/6P 39
452	R710	5178-390381	RES,MTL 1/6P 39
453	R711	5178-681381	RES,MTL 1/6P 680
453	R712	5178-681381	RES,MTL 1/6P 680
454	R713	5130-R030J152	RES,CBN 1/2P 1.5K
457	⚠ R714	5102-5604713	RES,FUSE 56
459	R715	5130-R030J102	RES,CBN 1/2P 1K
459	R716	5130-R030J102	RES,CBN 1/2P 1K
440	R717	5130-R010J5R6	RES,CBN 1/6P 5.6
440	R718	5130-R010J5R6	RES,CBN 1/6P 5.6
458	R719	5130-R010J221	RES,CBN 1/6P 220
458	R720	5130-R010J221	RES,CBN 1/6P 220
459	R721	5130-R030J102	RES,CBN 1/2P 1K
459	R722	5130-R030J102	RES,CBN 1/2P 1K
		TRANSISTORS	
409	Q601	5613-2320L(F)	XISTOR,NPN R
409	Q602	5613-2320L(F)	XISTOR,NPN R
409	Q603	5613-2320L(F)	XISTOR,NPN R
409	Q604	5613-2320L(F)	XISTOR,NPN R
410	Q605	5611-999L(F)	XISTOR,PNP R
410	Q606	5611-999L(F)	XISTOR,PNP R
411	Q607	5614-2012	XISTOR,NPN A
412	Q608	5612-1375	XISTOR,PNP A
426	Q609	5613-2320L(F)	XISTOR,NPN R
426	Q610	5613-2320L(F)	XISTOR,NPN R
426	Q611	5613-2320L(F)	XISTOR,NPN R
426	Q612	5613-2320L(F)	XISTOR,NPN R
447	Q701	5613-2855(E)	XISTOR,NPN R
447	Q702	5613-2855(E)	XISTOR,NPN R
448	Q703	5611-1190(E)	XISTOR,PNP R
448	Q704	5611-1190(E)	XISTOR,PNP R
449	Q705	5614-667A(C)	XISTOR,NPN A
		DIODES	
408	D601	5635-HZ16-2L	DIODE,ZENER
408	D602	5635-HZ16-2L	DIODE,ZENER
445	D701	5635-HZ11B2L	DIODE,ZENER
		MISCELLANEOUS	
407	CW602	4163-S0202201	CONNECTOR W/W,2 PIN
446	PJ701	4489-04006002	PIN JACK,MLT,PHONO
455	L701	5597-3	CORE,BEADS
455	L702	5597-3	CORE,BEADS
455	L703	5597-3	CORE,BEADS
455	L704	5597-3	CORE,BEADS
437	LUG101	4211-4	LUG,C725
431	W601	4142-00151241	SHLD WIRE,2C
432		2240-Z031	HOLDER,H601(W601)
		CHASSIS MISCELLANEOUS	
460		4214-168	TERMINAL,GND
		PACKING UNIT PARTS LIST	
107		1111-1780J152	OWNER GUIDE
109		1231-00401	GIFT BOX
113		1241-00501	POLYETHY BAG,SET
115		1756-00307	LABEL,OPTIONAL PHONO BOARD